

The Rollback of South Africa's Chemical and Biological Warfare Program

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**THE ROLLBACK OF SOUTH AFRICA'S
CHEMICAL AND BIOLOGICAL WARFARE
PROGRAM**

by
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Chronology

1939-1945	South Africa produces mustard gas during World War II.
1946	South Africa dumps mustard gas out to sea.
21 March 1960	The Sharpeville Massacre incident brings international condemnation of South Africa.
1962-1967	Egypt uses chemical warfare in North Yemen.
1963	South Africa accedes to the 1925 Protocol to the Geneva Convention, banning chemical and biological warfare (CBW). UN approves a voluntary arms embargo against South Africa.
1964	South Africa begins to assist Portugal and Rhodesia in counter-insurgency campaigns against guerrilla forces.
1967	South African Police (SAP) intervene in Rhodesia against guerrillas.
1972	South Africa signs the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological and Toxin Weapons and on Their Destruction (the BWC).
1974-1975	“Détente” between South Africa and Zambia leads to cease-fire and SAP withdrawal from Rhodesia.
1975	South Africa ratifies BWC.
25 June 1975	Mozambique becomes independent under a revolutionary communist regime.
11 November 1975	Angola becomes independent under a revolutionary communist regime. Cuban troops stop South African offensive.
December 1975	Clark Amendment stops U.S. aid to UNITA and leads to isolation of South Africa in Angola.

February 1976	Defense Minister P.W. Botha delivers a speech to the South African Parliament, warning of a Soviet-led “total onslaught” campaign, which could involve NBC weapons.
16 June 1976	Soweto Uprisings begin and last until 1977, leading to a call for more effective crowd control CBW agents.
1976-1979	War in Rhodesia (Zimbabwe) intensifies and leads to accusations of South African involvement in CBW attacks. Preparations proceed for a sophisticated CBW program.
1978	P.W. Botha becomes Prime Minister.
May 1978	Cassinga Raid on guerrilla camp in Angola leads to accusations of South African CW.
1980	Gen. Magnus Malan becomes Defense Minister.
April-May 1981	Project Coast is launched, with Dr. Wouter Basson as Director.
August 1981	Operation Protea is launched by SADF in Angola.
1982	Delta G Scientific Company begins work on CW agents.
December 1982	Dr. Basson allegedly arranges killing of 200 SWAPO prisoners.
1983	Roodepoort Research Laboratories (RRL) begins work on BW agents. P.W. Botha becomes State President under new constitution.
1984	A new wave of uprisings begins and lasts until 1986. CDC, Atlanta, sends samples of Ebola, Marburg and Rift Valley viruses to South Africa.
June 1985	State of Emergency is declared in South Africa.
1985	Plans for a chemical and biological weapons program are devised.
1986	Covert negotiations begin between the regime and the ANC.

1985-1989	Both sides in the Angolan war raise claims of rival use of CW.
October 1987	Both sides claim CW used by other in battle of Cuito Cuanavale in Angola.
1988	Surgeon General Nieuwoudt dies and is replaced by Dr. Knobel. Negotiated settlement concluded for the withdrawal of Cuban forces from Angola and South African forces from Namibia.
January 1989	P.W. Botha suffers a stroke and is replaced by F.W. de Klerk on an interim basis.
April 1989	The Civil Cooperation Bureau (CCB) attempts to assassinate Rev. Frank Chikane with poison.
30 July 1989	President de Klerk announces the formation of the Kahn Committee to investigate covert activities by security forces. Project Coast is not investigated.
September 1989	F.W. de Klerk is elected and assumes office as President.
November 1989	President de Klerk orders rollback of nuclear weapons program.
January 1990	U.S. issues warning to South Africa, calling for nuclear disarmament, or else the U.S. would consider South Africa to be “hostile” to the U.S.
February 1990	Ban on ANC is lifted, and Nelson Mandela is released.
26 March 1990	Dr. Knobel briefs President de Klerk on Project Coast as a “defensive” CBW program. De Klerk orders destruction of lethal agents.
April 1990	Defense Minister Malan orders privatization of Delta G, RRL and Protechnik.
1990-1991	The Harms Commission investigates “third force” activities in South Africa.
July 1991	Privatization of Delta G, RRL and Protechnik proceeds, leading to massive payments to Basson and his associates.

September 1991	U.S. becomes aware of Project Coast.
19 November 1991	Kahn Committee issues final report, but Project Coast is not included.
December 1991	Basson sent to Croatia and buys 500 kgs. of methaqualone to import into South Africa.
16 January 1992	Suspected CW attack by South Africa is launched against Mozambique.
18 November 1992	Lt. Gen. Pierre Steyn is appointed to investigate SADF secret projects, including Project Coast.
January 1993	President de Klerk receives the Steyn Report, retires 27 generals and Col. Basson, and orders rollback of Project Coast. Documents are placed on CD-ROM and CBW agents are dumped out to sea.
31 March 1993	Basson is retired from active duty and removed as head of Project Coast.
August 1993	Office of Serious Economic Offenses (OSEO) informs the CIA and MI-6 of the misdeeds of Basson and Project Coast.
October 1993	Basson makes the first of five trips to Libya.
November 1993	U.S. and UK object to the South African Confidence Building Measure (CBM) for the BWC.
January 1994	Negotiated settlement reached for elections and an interim government.
11 April 1994	U.S. and UK ambassadors deliver <i>demarche</i> to President de Klerk regarding Project Coast secrets and CBW proliferation.
21 April 1994	President de Klerk responds to <i>demarche</i> and asserts that Project Coast CD-ROMs are a “national asset” and will not be destroyed.
27 April 1994	Nelson Mandela and ANC win elections and head interim government of national unity.
19 August 1994	Dr. Knobel briefs President Mandela on Project Coast.

November 1994	OSEO completes Project Coast report. It is labeled “top secret.”
15 April 1995	South Africa submits revised BWC CBM, with U.S. and UK approval.
May 1995	Basson is rehired as a regular SANDF surgeon.
October 1995	Basson makes the last of five visits to Libya.
December 1995	Truth and Reconciliation Commission (TRC) is established.
February 1996	After 16 months, the Mandela cabinet acts on the OSEO report on Project Coast.
January 1997	Basson is arrested in Pretoria while selling 1,000 Ecstasy tablets and is found in possession of secret Project Coast documents.
June 1998	Project Coast scientists testify before TRC.
July 1998	Basson testifies before TRC.
August 1998	Basson is charged on 17 counts, including murder, conspiracy to commit murder and fraud.
4 October 1999	Basson trial begins in Pretoria.
27 February 2001	State rests its case in the Basson trial.

The Rollback of South Africa's Chemical and Biological Warfare Program

by Stephen Burgess and Helen Purkitt

I. Introduction

From the 1960s until the 1990s, *apartheid* South Africa was an isolated state that felt threatened by growing domestic unrest, as well as by a more powerful state actor, the Soviet Union, which was helping hostile regimes and liberation movements in southern Africa.

One response of the *apartheid* regime to changing threat perceptions outside and inside of South Africa was to develop a new and more sophisticated chemical and biological warfare (CBW) program, code-named "Project Coast," and to accelerate a nuclear weapons program. The CBW decision-making process was secretive and controlled by the military and enabled a very sophisticated program to be developed with little outside scrutiny. Military and police units used chemical and biological agents for counter-insurgency warfare, assassination, and execution of war prisoners.

As the regime felt increasingly threatened by opposition at home, top political leaders approved plans for research and development of exotic means to neutralize opponents, large-scale offensive uses of the program, and weaponization. However, the plans were not operationalized. The end of the external threat led to a decision to unilaterally dismantle the program, prior to a shift to majority rule. Lack of civilian control over military programs made the rollback difficult, rife with corruption, and left proliferation concerns in place.

Ultimately, the United States, Great Britain, and other countries pressured the South African government to ensure that the CBW program was dismantled and the former project manager, Dr. Wouter Basson, constrained. However, Basson secretly retained copies of Project Coast documents, which helped to perpetuate proliferation concerns.

Today, a divide exists between those who believe that South Africa developed the "second most sophisticated" program, after the Soviet Union's, and are concerned about proliferation, and those who believe that it was

“pedestrian.” The former are focused on the proliferation danger, while the latter are focused on the criminality and corruption of the program.

This monograph analyzes the origins and development of the South African CBW program, as well as its rollback. It concludes with a profile of South Africa as a state that produced weapons of mass destruction and with a list of outstanding questions. More than 20 policy lessons, based on the South African case, are presented, which should be considered in future CBW non-proliferation studies (see Appendix B).

II. The Origins of the Chemical and Biological Warfare Program

In 1981 or earlier, the South African government initiated Project Coast, a sophisticated chemical and biological warfare (CBW) program. The focus here is on the biological aspect of the program, which was especially sophisticated, and how it developed.

Project Coast was not the first CBW program that the South African government had developed. From 1914-1918 and 1939-1945, South African troops fought in the two World Wars and faced the threat of CBW. Although the 1925 Geneva Convention banned the use of chemical and biological weapons in warfare, Japan and possibly the Soviet Union employed such weapons in WWII. As early as the 1930s, widespread evidence emerged of the efficacy of biological warfare (BW) based on scientific work conducted in the US, United Kingdom, and the Soviet Union.¹ The South African scientific and military communities kept pace with the various developments in CBW.

In the 1940s, South Africa produced mustard gas for possible use in WWII. According to Dr. Renfrew Christie,² the mining industry had developed, since the 1930s, explosives that were linked with chemical agents. The Anglo-American Corporation, Anglo-Vaal, and other companies were involved. The Director-General of War, H.J. van der Bijl, oversaw the production of chemical weapons and defensive measures that would protect South African troops against chemical and biological attack during the Second World War.

During WWII, South African Prime Minister Jan Smuts was a member of the British War Cabinet and party to CBW planning. For example, the War Cabinet, in 1943, planned to retaliate against the threat of Nazi biological warfare (BW) on British livestock. The plan was to use anthrax spores, released by 500-pound cluster bombs, each containing over 100 four-pound spore devices. Trials at Porton Down in the UK indicated that the cluster bombs produced effective aerosol concentration of spores that covered nearly 100 acres from impact.

The War Cabinet viewed this biological weapon as a “quick-fix” solution weapon requiring no special munitions or hardware. The British would simply charge ordinary cattle cakes with anthrax spores. This was a

neat and simple example of wholly effective, precision deliverance, literally down the throat and into the stomach of targeted cattle. By the end of WWII, the British had stockpiled five million cakes.³ During the Second World War, South Africa learned from the British the lesson that BW was simple technology that anyone could use and that it could be effective, under certain conditions, in Africa.⁴

In the 1940s and 1950s, South Africa's wartime connections with Britain and the United States continued. South African officers trained in Britain and the United States in chemical and biological warfare strategy and tactics.⁵ Also, in the 1950s, the Eisenhower administration initiated the United States "Atoms for Peace" program, which proved to be a significant factor contributing to South Africa's later ability to produce nuclear weapons.⁶

After the Second World War, in 1946, South Africa dumped large quantities of mustard gas out to sea. However, South Africa did not roll back its CBW program entirely. According to Dr. Vernon Joynt of Mechem (an explosives warfare company) and the Council for Scientific and Industrial Research (CSIR),⁷ the literature on the World War II program was maintained. Also, the South African Defense Force (SADF) maintained a small military program related to CBW research and development. The government also maintained funding for a modest number of basic research projects located in the Afrikaans universities and other government supported institutions. Much of this research was conducted under the umbrella of CSIR.

In 1960, Dr. Joynt helped start a new phase of the chemical warfare (CW) program, when he corrected a problem with tear gas that was then used to control riots and to deal with militants hiding in the bush. In the 1960 Pondoland uprising in Transkei, tear gas was extensively used. That same year, Dr. Joynt was sent to a nuclear, biological and chemical (NBC) warfare course in the United Kingdom. In the 1960s, CSIR continued to work on tear gas and on CX powder for tracking. Dr. Joynt fitted Cessna Aircraft, which were used by SADF in spreading CX powder. In the mid-1960s, CSIR worked on mustard gas and on gas masks to replace the World War II-vintage masks of the SADF.

The Egyptians had used chemical weapons in Yemen in the mid-1960s and may have passed their expertise on to the African National Congress (ANC). So, South African leaders realized the importance of updating their

own CBW program. The EMAC (electrical, mechanical, agricultural, and chemical) Department worked on and innovated weapons, including those using chemical and biological agents, during the 1960s and 1970s.⁸

In 1963, South Africa belatedly became a party to the 1925 Geneva Convention, banning the use of chemical and biological weapons in warfare. From 1925 to 1963, South Africa was not willing to forswear CBW in combat situations. South African accession to the Geneva Convention and ratification of the 1975 Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological and Toxin Weapons and on their Destruction (BWC) did not deter *apartheid* leaders from continuing to develop a new and more sophisticated CBW program in the 1980s.

According to Dr. Joynt, in the early 1970s, SADF generals asked the CSIR for “aggressive” CBW agents and wanted a CBW industry started. Dr. Joynt’s superior, J. Wynand de Villiers commented that Africa was not the kind of continent for CBW and that a CBW program was too “complex” and too expensive to develop. In 1974, de Villiers wrote a 10-page report, in which he gave a R500 million (more than \$500 million in 1974 U.S. dollars) estimate to build a CBW program. Finally, de Villiers concluded that the USSR was too well armed with CBW and would retaliate against any CBW attack.⁹ The SADF postponed its plans to develop an offensive CBW program and supported a minimal CBW research and development program, which was never well developed. By 1980, it consisted of only one individual who worked on CBW at the Special Forces complex in Pretoria.¹⁰

After the Sharpeville Massacre of 1960 and the imposition of a United Nations arms embargo, the rulers of South Africa developed a heightened sense of isolation, withdrawing from the British Commonwealth in 1961 and distancing South Africa from the West. Especially under Prime Minister Verwoerd in the 1960s, the ruling *Afrikaner* nationalist elite developed a “laager” (or “circle the wagons”) complex. *Afrikaner* nationalists saw themselves as an ethnic and religious minority and as “God’s chosen people,” surrounded by “black heathens” and “godless communists” and betrayed by the West. The iconoclastic character of the *Afrikaner* nationalists had been developed over 300 years of settler history and a series of wars, with African kingdoms and with the British Empire. As the laager complex deepened, a similar process of isolation was developing in Israel, known as the “Masada complex.” Like their South African counterparts, Israeli leaders saw

themselves as a “chosen people” surrounded by enemies who were attempting to annihilate them. By the late 1960s and early 1970s, the isolation of South Africa and Israel by African and Arab states led both countries to cooperate with each other on armaments development, including the nuclear weapons and missile programs. It is suspected that they also cooperated on chemical and biological warfare research and development.

Counter-insurgency and Chemical and Biological Warfare in Southern Africa

South Africa's threat perceptions changed as guerrilla activities in the southern African region increased in the 1960s and 1970s. South African involvement in counter-insurgency campaigns in the region influenced the direction that South Africa's CBW development took in the 1980s, and also provided useful training opportunities, strategies, and tactics that influenced the way South African defense and police special covert units used CBW against political opponents. Moreover, many of the Selous Scouts, Rhodesia's elite counter-insurgency force, who were experienced in using CBW for counter-insurgency, joined South Africa's Special Forces and police after the political transition in Zimbabwe in 1980. The Rhodesian CBW program has been chronicled by a former top Rhodesian agent, Henrik Ellert and by Tom Mangold in *Plague Wars*.¹¹ Some former Selous Scouts played key roles in incidents where South African Special Forces and police used CBW agents against opponents during the 1980s and 1990s.¹²

In the early 1960s, South Africa's response to developing guerrilla movements and a changing regional security environment was to increase security force cooperation with Portuguese forces fighting guerrilla insurgencies in the former colonies of Angola and Mozambique and with Rhodesian police and defense forces. Increased involvement in security operations in southern African states was part of a national security strategy designed to counter communist-inspired guerrilla campaigns in those states. Also, the regime sought to be in a position to launch attacks on African National Congress (ANC) and Pan-Africanist Congress (PAC) military training camps in Zambia and Tanzania.¹³ The South African military was anxious to obtain first-hand experience with counter-insurgency techniques and interested in exploring the potential usefulness of unconventional

chemical and biological weapons.¹⁴

The Portuguese military were the first to use CBW for counter-insurgency warfare in Africa. Portuguese troops poisoned wells and threw drugged prisoners out of aircraft. South African military officers were dispatched to Portuguese Army units in Angola to gain experience in counter-insurgency warfare. In general, South African military personnel were not impressed with the overall effectiveness of Portuguese counter-insurgency programs. However, officers who worked in Angola did learn first-hand how the Portuguese military used defoliants and napalm, mined trails, and poisoned water holes as tactics to counter their guerrilla enemies without having to engage in direct combat.¹⁵

In the 1960s, South African police and military personnel started helping the former Rhodesian government deal with an increased “terrorist” threat.

In 1967, the South African Police (SAP) sent a contingent to help with border patrols, as ANC and Zimbabwe African Peoples Union (ZAPU) guerrillas infiltrated into the country from Zambia. The SAP trained Rhodesian intelligence personnel and, later, the Selous Scouts in mine laying and other counter-insurgency techniques. The SAP acquired some of their techniques from the French in Algeria.¹⁶

In the mid-to-late 1960s, South African Defense Force (SADF) military advisers in Zimbabwe assisted with the interrogation of captured ANC guerrillas. The South African military was interested in gaining experience in bush warfare and establishing enhanced intelligence monitoring capabilities of ANC and PAC political and guerrilla activities in neighboring states. A detachment of Corps of Signals of the SADF Monitoring Division known as “V Troop” started intercepting and de-ciphering coded radio transmissions of Zambian police in 1968. After the high-profile withdrawal of SAP forces in early 1975, SADF personnel remained behind, maintaining a low profile. Their presence was increasingly important to Rhodesian security, and SADF personnel participated in several counter-insurgency operations conducted by the Selous Scouts, from 1973 to 1979, in Rhodesia, Mozambique, and Zambia.¹⁷

The former commander of the Selous Scouts emphasized the importance of counter-insurgency tactics developed by the British in Malaysia and Kenya, but noted that they had to modify these tactics in the process of

developing their distinctive approach towards counter-insurgency warfare.¹⁸

This approach included a willingness to experiment with new types of weapons, including chemical and biological ones.¹⁹ The Selous Scouts experimented with the use of poisons, for example, to impregnate toxins into blue jeans slated for guerrillas of the Zimbabwe African National Liberation Army (ZANLA) and Zimbabwe Peoples Revolutionary Army (ZIPRA) guerrillas. The Scouts also experimented with poisoned pens to assassinate guerrilla leaders, and with bacteriological cultures that they introduced into the Ruya River near the Mozambique border in 1976. Former top Rhodesian intelligence operative, Henrik Ellert, claims that a Selous Scout operation poisoned the water supply of a town in Tete province, Mozambique in an attempt to kill ZANLA guerrillas who were reported to be operating in the area. Other accounts allege that Rhodesian military forces experimented with cholera to contaminate rivers and with the seeding of anthrax spores in farming areas used by ZANU and ZAPU in an effort to poison guerrilla food supplies.²⁰ Finally, Rhodesian forces poisoned wells and were suspected of using chemical and biological agents, especially in Rhodesia's Eastern Highlands and across the border in Mozambique.²¹

As the 1970s developed, the Rhodesian government became increasingly dependent on South Africa for financial support and military hardware. By the end of the 1970s, SADF military intelligence was a principal source of funding for the Rhodesian counter-insurgency program, including the Selous Scouts. The Rhodesian defense budget was very small, and the regime had one rudimentary chemical and biological warfare plant that received outside aid from South Africa. In assisting Rhodesia, South African researchers continued to work on CBW and land mine projects.²²

After 1980 and the independence of Zimbabwe, South African involvement in the Rhodesian guerrilla war provided useful training opportunities and personnel connections. Many Selous Scouts left Rhodesia and were quickly integrated into special units of the SADF and SAP. SADF Special Forces and SAP officers stationed in Rhodesia had studied the organizational structures and tactics used by the Selous Scouts, including the use of chemical and biological agents.

Similar tactics were used in Namibia and Angola by personnel assigned to the 5th Reconnaissance Commandos, by the SAP security branch

“crowbar” (*koevoet*) unit, and by the SADF Special Forces D40 unit. They were also employed in covert support operations for the Union for the Total Independence of Angola (UNITA) and in Operation Barnacle in the 1970s and 1980s.²³

The Civil Cooperation Bureau (CCB) in South Africa employed many of these same tactics against political dissidents in the late 1980s and early 1990s. Toward the end of the *apartheid* era, the use of poisons against dissidents became routine CCB practice. By the time Eugene De Kock took charge of the CCB in 1988, he had a working relationship and regular contacts with Wouter Basson, the director of the CBW program, known as Project Coast. Whenever the CCB wanted “special tools” for interrogations or to eliminate political dissidents, Basson was available to supply customized orders.²⁴

Variable Effectiveness of CBW in Counter-Insurgency and Difficulties Verifying Use of Biological Agents

Evidence of the use of biological and toxic agents during the Rhodesian war indicates variability and, in some instances, unintended consequences. For example, the program developed by the Selous Scouts to poison new blue jeans that were then to be worn by ZANLA guerrillas was aborted, after several farmers died when they purchased and wore the jeans. Selous Scouts intermediaries, who were paid for each pair of jeans delivered to guerrillas, had started to sell the pants to stores that serviced rural populations.

After the Selous Scouts received reports that ZANLA rebels were using a village in Tete province, Mozambique, the Selous Scouts introduced poisonous biological agents into the Ruya River to kill the guerrillas and their supporters. Despite intensive intelligence gathering efforts, no effects on the guerrillas were detected. However, over 200 villagers died suddenly after drinking the water in the reservoir that the Selous Scouts had poisoned.²⁵

Debates continue today about the veracity of the claim that former Rhodesian forces, with South African involvement, planted anthrax spores in grain fed to cattle in guerrilla-held areas and caused an anthrax epidemic that struck 10,000 cattle in Zimbabwe in the early 1980s. This long-standing claim was published in 1999 in *Plague Wars*,²⁶ a book issued in tandem with a BBC Panorama documentary on biological warfare (BW). Officials of the

Zimbabwean veterinary service repeated the claim in 1999. They noted that the strain of bacteria responsible for the outbreak was not native to Zimbabwe and immediately alleged that these incidents could be linked to South Africa's past CBW program. The Zimbabwean government has continued to emphasize that recurring anthrax outbreaks can be traced to past South African involvement in the Rhodesian civil war.²⁷ At this writing, these allegations by the increasingly unpopular Zimbabwean government have not been substantiated.²⁸

The continuing debate about past use of anthrax as a biological weapon highlight the fact that many biological agents have long-term effects that are difficult to verify whether they were caused by deliberate action or were natural in origin. The continuing controversy, more than two decades after the event, about whether anthrax was used suggests that BW allegations can be used as both a psychological weapon to intimidate civilians and rebels in a conflict zone and as a political dis-information and diversionary tool by unpopular governments.²⁹

In 1993, there was an outbreak of cholera in Zimbabwe. Dr. Timothy Stamps, the Zimbabwean Minister of Health, told Tom Mangold of BBC Panorama that he believed this outbreak was the result of another BW attack since it seemed to be a controlled outbreak lasting three months and was eliminated in seven months.³⁰

The SADF experienced similar problems and variable results in their efforts to counter CBW agents in military operations in Angola, Namibia, and Mozambique, as well as inside South Africa. Several CBW incidents underscored the variable effectiveness and unintended consequences of CBW, as well as the difficulties involved in documenting a CBW attack and those who initiated it.

From the late 1970s onward, South Africa stepped up its military activities, by supporting UNITA in Angola and the Mozambican Resistance Movement (RENAMO) in Mozambique. Operation Barnacle was launched, aimed at the ANC and its armed wing, Umkhonto we sizwe (MK), throughout southern Africa. In May 1978, SADF launched the Cassinga raid against a South West African Peoples Organization (SWAPO) camp, killing more than 800 people. In the wake of the raid, SADF soldiers and paratroopers were accused of using chemical warfare.³¹ Combined with the reports coming out of Rhodesia and Mozambique of CBW usage, the Cubans,

Angolans, and Mozambicans, as well as the ANC, PAC, and SWAPO came to suspect that South Africa possessed an offensive CBW program.

In Angola in the 1980s, South African troops faced increased costs and maneuverability problems once they were confronted with the prospect of wearing defensive CBW masks and uniforms that had to be changed daily.

SADF troops routinely avoided local water supplies in Angola and parts of Namibia because they had little intelligence about whether water supplies had been poisoned by SADF Special Forces secret operations or by guerrillas of SWAPO, ANC, or UNITA.³²

The SADF experienced repeated difficulties in verifying alleged use of CBW gas by Cuban-backed Angolan government forces. Further, they were unable to irrefutably rebut allegations that SADF forces used chemical agents against SWAPO and refugee camps in Angola and Namibia. In addition, reports persisted that, in early 1989 in Angola, SADF was testing organophosphates, new generations of teargas, and battlefield missile warheads. Supposedly, the warheads were being designed to deliver chemical, biological agents, and possibly even a miniaturized nuclear device.

Also, in early 1989, UNITA forces in Angola reportedly experienced “huge losses.”³³ Some sources alleged that the deaths were due to SADF testing of chemical gases. Other sources close to SADF claimed that the deaths were due to an “unexpected shift in the wind” that blew chemical gases onto the UNITA troops.

The question of who used what type of agents in Rhodesia, Namibia, Angola, and Mozambique raises important issues. If South African forces were involved in offensive CBW in southern Africa in the 1970s, it would have violated international commitments. These included the 1925 Geneva Protocol, to which South Africa acceded in 1963, and the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological and Toxin Weapons and on their Destruction (BWC), which South Africa signed in 1972 and ratified in 1975. Also, it means that the regime might have previously developed chemical and biological weapons and used them. Claims that Project Coast was developed in the 1980s as a “defensive” program, in reaction to the “Soviet and Cuban threat” in Angola and Mozambique would lose credibility. The South Africa of the 1970s would be viewed even more as an “outlaw state,” willing to break conventions and subject black victims to chemical and biological attacks. If

true, it would also appear that the regime was prepared to continually violate commitments to international law, if threats to its survival continued to grow.

Perceptions of a Soviet and Cuban “Threat” and Moves towards a Sophisticated CBW Program

The collapse of Portuguese colonialism led, from 1974 to 1976, to the takeover of Angola and Mozambique by revolutionary communist regimes, backed by the Soviet Union and Cuba. Suddenly, South African leaders found themselves surrounded by communist forces, which were viewed as implacable and unscrupulous enemies. South African defense experts knew that the Soviet Union possessed nuclear, biological, and chemical (NBC) weapons. In regard to the Soviet BW program, indications of its scale and sophistication had been gained during and after negotiations surrounding the 1972 Biological Weapons Convention (BWC).

According to former South African leaders and generals, NBC programs were developed with the intention of “countering the communist onslaught.” General (retired) Georg Meiring, former SADF Chief of Staff, commented that SADF sought protection against BW in the 1970s, as biological weapons became known as the “poor man’s atomic bomb” and as the possibility of BW operations by Soviet-trained SWAPO and ANC/MK guerrillas increased.³⁴

According to Magnus Malan (SADF Chief of Staff, 1975-80 and Defense Minister, 1980-91), the U.S. encouraged the SADF to enter Angola in October 1975, and then abandoned South Africa to face Cuban forces alone.³⁵ In addition, South Africa faced the Soviet and Cuban NBC threat alone.

In response, P.W. Botha and Malan proceeded to approve a new and more sophisticated CBW program and acceleration of the nuclear weapons program. Brig. Gen. (ret) Bill Sass, former State Security Council member and SADF Chief of Operations,³⁶ commented that the nuclear weapons program was developed to defend South Africa against a major communist onslaught. First, South Africa would announce that it was testing a nuclear weapon in the hope of drawing in the U.S and the West to resolve the crisis. Second, South Africa would announce that it was targeting a major African

city, like Luanda, which might induce a Soviet nuclear threat and U.S. intervention.

Similarly, Malan, Meiring and others claimed that the CBW program was intended to counter the Soviets and Cubans and ANC and SWAPO guerrilla groups, who might have used chemical and biological weapons of their own in the 1970s and 1980s.³⁷ However, such contentions remain open to question and are unproven, until documents from the 1970s prove these perceptions and actions actually existed.

“Total Onslaught” and Project Coast: Protests and Violence in South Africa Fuel Support for Expanded CBW Program

In 1976, the Soweto uprisings began, bringing a wave of unrest to South Africa, after more than a decade of relative calm. The 1976 wave of rebellion continued into 1977. Unrest would persist until 1984, when an even greater uprising commenced and lasted for more than two years and reverberated until 1990. The 1976 uprisings led the *apartheid* regime to search for ways, including the use of chemical agents, to control or incapacitate large groups of people.

After the Soweto uprisings commenced, a high-level political scandal erupted, “Muldergate,” which was named after Connie Mulder, the heir apparent to Prime Minister B.J. Vorster. The scandal demonstrated that corruption was eating away at the formerly unquestioned strength of the *apartheid* regime. Informal norms had become entrenched by the mid-1970s that permitted an extensive level of corruption within the Afrikaner-dominated bureaucracies. The corruption was an important pre-condition that allowed Wouter Basson and other top officials to use the CBW program in the late 1980s and early 1990s as a cover for their personal gain.

In the wake of these regime-shaking events, the Defense Minister, P.W. Botha, replaced B.J. Vorster as Prime Minister in 1978 and initiated his vision of the “total strategy.” Botha differed from his predecessor in that he was oriented towards the military (and special forces), especially because of his years of service as defense minister. He initiated a range of reforms, combined with the widespread use of coercive power, to ensure the survival of the regime. Power was increasingly consolidated in the hands of the military and taken away from civilians.

In particular, Botha favored the development of advanced weapons projects and covert operations that would give South Africa additional advantages against its adversaries. South Africa initiated a series of internal and external military and paramilitary operations. These included assassinations, torture, and smuggling, as well as forgery, propaganda, and subversion. All were defined as “legitimate” weapons against the “total onslaught” of “red” and “black” forces. These practices were established at the top and legitimized deviant behavior throughout the military, police, and intelligence services.³⁸

Within the “any means necessary to survive” framework, preparations began to develop a chemical and biological warfare (CBW) program, called Project Coast, which would counteract and even rival the Soviet program. P.W. Botha and SADF Chief, Magnus Malan directed the Surgeon General, Major General Nieuwoudt, to launch the program.³⁹ Nieuwoudt enlisted a young military doctor, Wouter Basson, to be his lieutenant and program director. In the late 1970s, they approached South African university scientists and specialists in weapons development to determine if they would be willing to participate in and even lead the different components of a CBW program.⁴⁰ They also began to make contacts in the international scientific community.

The Organizational Context of Project Coast: The 7th Battalion of SADF's South African Medical Service (SAMS)

The decision to locate the new chemical and biological warfare program, Project Coast, within SADF's South African Medical Service (SAMS) would have important consequences for both the way the program was managed and the direction of research and development over time. At the time Project Coast was launched, SAMS existed as a separate medical branch of the South African military that had joint ties with Special Forces. The close connection with covert Special Forces operations provided a highly secret and loosely managed organizational context for the new chemical and biological warfare program. Weak managerial oversight and accountability quickly led to personal abuse of authority and corruption by Project Coast manager, Wouter Basson.

South Africa's involvement in Angola in the 1970s and 1980s resulted

in important organizational changes within the military that ensured that the new CBW program was controlled by the military. Between 50 and 80 percent of all SADF military related deaths in Angola were due to difficulties encountered in getting immediate treatment for combat injuries, accidents, or treatment for diseases. There was already a long-standing appreciation among military leaders for the importance of immediate field treatment for SADF soldiers. This appreciation can be traced back to the large number of casualties incurred in the Anglo-Boer War.⁴¹

In Angola, the importance of immediate battlefield medical attention was the primary rationale used to justify elevating and re-organizing the SAMS, as a new and separate fourth branch of the military. The new medical corps branch was placed on an equal footing in terms of operational command and administrative matters with the three existing branches of the service (army, navy, and air force). SAMS received a mandate to develop defensive capabilities and to train to protect the South African Defense Force (SADF) from all types of attacks, including biological and chemical warfare. This mandate was the principal reason why managerial oversight and responsibility for the new CBW program was given to the 7th Battalion of the South African Medical Service.

SAMS's mission changed and became more ambiguous, as SADF forces shifted from battlefield operations to policing functions at home. The fact that 7th Battalion was accorded a large degree of autonomy from its inception and operated on a strict "need-to-know" basis meant that relatively few SADF officers, including the majority of senior SADF generals, had detailed knowledge of the activities of 7th Battalion throughout its existence.⁴²

The 7th Battalion was a special support organization that was established to support special services operations. SAMS medical personal (e.g., doctors and orderlies) were also Special Forces officers who underwent special service training. During the period of South African involvement in Angola, many of these medical personnel served as members of small (i.e., four-man) Special Forces covert action teams. While the military Surgeon General was responsible for the operations of seven medical battalions, the secret nature of the 7th Battalion operations during incursions into Angola meant that this unit had a high degree of operational autonomy. This autonomy and latitude for independent action continued throughout the 1980s, even though new types of Special Forces operations at home increasingly replaced the combat-

related functions of the unit. As the SADF increasingly undertook policing and internal suppression of political dissidents at home, SAMS conducted new basic research projects and the development of new chemical and biological weapons that might assist.

Maj. Gen. Nieuwoudt, the Surgeon General and head of SAMS, recruited Major (Dr.) Wouter Basson, the respected young cardiologist and personal physician of P.W. Botha, to head Project Coast.⁴³ Although Project Coast was run by the military, Basson proved to be a highly successful entrepreneur who played a key role in defining the research and development agenda. He capitalized on the secret nature of this unit to establish a number of new projects and as a rationale for acting alone.

From the start, Basson was a highly charismatic and effective recruiter who was apt at identifying and enlisting some of the most promising and highly skilled medical researchers from the military and from the larger civilian scientific community. Basson also proved to be a master manager of people. He was able to inspire loyalty and respect from employees. Many of these researchers and scientists joined the program because they were intrigued by the intellectual challenges and opportunities to participate in path-breaking research in one of several related disciplines, e.g., chemistry, anatomy, and virology. Almost all were *Afrikaner* South Africans who shared a sense of patriotic duty, a nationalistic zeal for the importance of the work, and a sense that their research was critical for maintaining national security.⁴⁴

III. Project Coast, 1981-1993

From 1979 through 1981, the State Security Council, led by Prime Minister Botha and Malan, and the SADF discussed the principles that might apply to the CBW program. It became clear that a program to defend against a Soviet CBW attack could only be built if the Soviet offensive program was emulated and then tested.⁴⁵ As it became evident that an offensive CBW program was to be developed, discussions began concerning the possible uses for such a program. Malan proposed that signs of a chemical warfare attack in Angola would force the Cuban and Angolan forces to don suits, which would cut combat effectiveness in half. In 1981, General Constand Viljoen, SADF Chief of Staff, requested that the CBW program provide SADF with agents for crowd control in South Africa. Other possible uses considered included counter-insurgency, assassinations, and black population control. It is noteworthy that, during the process of launching the CBW program, no delegation from South Africa appeared at the 1980 review conference for the 1975 Biological Weapons Convention.

In April 1981, a top-level SADF committee meeting finalized the principles for Project Coast.⁴⁶ One principle was that chemical and biological warfare (CBW) should be treated as a top-secret matter, because it was susceptible to deception by adversaries. Another was that, since the West had supposedly fallen behind the Soviet Union, South Africa had to fend for itself in the CBW arena. The SADF committee decided that secrecy was essential and that South Africa would use front companies to research and produce chemical and biological weapons in top-secret installations. The desire for secrecy meant secret funding for the project, the creation of front companies, and the exclusion of the state arms producer (ARMSCOR) from the initial phases of the project. ARMSCOR would only be brought in during the weaponization phase of the program.

As Malan suggested, South Africa would experiment with a strategy of forcing the enemy in Angola to don protective suits. The CBW program would also investigate means of dealing with massive demonstrations, insurrection, and insurgency, as well as black population growth. Another principle was that biological warfare (BW) had to be used with caution. BW could be devastatingly effective and, therefore, attractive. However, the regime was concerned that BW was difficult to control and it could cause tremendous, plague-like damage.

In May 1981, the Surgeon General and head of SAMS, Maj. Gen. Nieuwoudt, established Project Coast, and the Minister of Defense, Magnus Malan, and the Minister of Finance, Barend du Plessis, approved the Program.⁴⁷ Nieuwoudt made Dr. Wouter Basson the Project Coast director, as well as specialist adviser to the Surgeon General. Basson also became a lieutenant colonel, joined the 7th SAMS Battalion, and began making trips to Angola with the SADF. In addition, he continued making trips abroad to make contacts with scientists and to procure supplies for Project Coast.

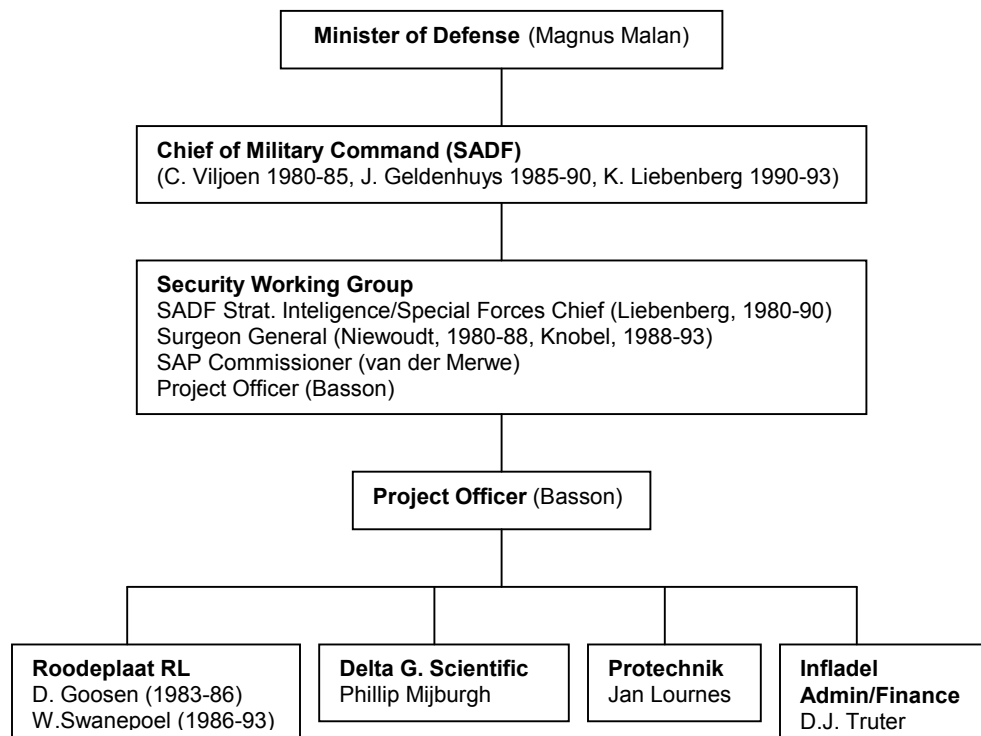
In August 1981, the SADF launched Operation Protea in Angola. During the operation, evidence was discovered that the Cubans might be preparing for chemical warfare.⁴⁸ Although the evidence was sketchy, top SADF generals chose to take action to counter CBW anyway. Defense Minister Malan took SADF generals to Angola to examine CBW protective suits and demonstrate problems that they created during combat. Afterwards, Malan reiterated his proposal that the SADF take measures that would force the Cubans rather than the South Africans to don suits. Accordingly, the SADF developed a strategy of deception, by firing “smoke” that would achieve such a result. In addition, Malan proposed that the CBW program be developed to counteract the ANC and its military wing, Umkhonto we sizwe (MK), which was in the process of escalating a revolutionary war with more than 3,000 guerrilla forces. The SADF had evidence that some of the ANC/MK troops had been trained in the Soviet Union in CBW techniques.⁴⁹

Basson was “tasked” to develop Project Coast by a “kitchen cabinet,” composed of Minister of Defense Malan, SADC Chief (Gen. C. Viljoen), the Commanding Officer of Strategic Intelligence and Special Forces (Gen. K. Liebenberg), SAP Commissioner van der Merwe, and the Director General of the National Intelligence Service (NIS). Basson was placed in charge of managing all aspects of Project Coast, including defensive and offensive measures.⁵⁰ The annual budget for Project Coast was estimated to be \$10 million, with a staff of 200 involved.⁵¹ Members of the Project Working Group included Surgeon General Nieuwoudt and his deputy and successor, Dr. Niels Knobel. They were supposed to supervise Project Coast, but Knobel has claimed that they would rarely visit the front companies for fear of compromising their cover. Basson decided with the scientific researchers on requirements and costs. Much of Basson’s efforts went into circumventing sanctions against the sale of military-related items to South Africa and into black market, sanctions-busting activities. All procurement was undertaken by Basson

and signed for by Nieuwoudt and his successor, Knobel, who has claimed that he and Nieuwoudt were only told after the fact about Basson's activities.

The problem of procurement by SADF was the lack of civilian leadership and supervision. The SADF was still supplied with uniforms using 1930s regulations. A Special Defense Account was established by the SADF that precluded access by the Auditor-General.⁵² Thus, while Wouter Basson was required to provide records of financial expenditures for Project Coast activities, there was no effort throughout this period to match these records with those of covert special operations.⁵³ The rationale of the need for secrecy for covert programs and Basson's unsupervised activities would lead Project Coast into a morass of corruption.

The chain of command demonstrates that major decisions about Project Coast were in the hands of Defense Minister Malan and top SADF generals. Below is the chain of command for Project Coast, along with the four companies that were established to develop the CBW program:



Chain of Command for Project Coast

In 1982, the Delta G Scientific Company began work on chemical warfare agents for Project Coast. The chemicals that Delta G developed for testing were divided into lethal, incapacitating, and irritating agents. Roodeplaat Research Laboratories (RRL) then tested the biological effects of the agents from Delta G. RRL was the company that was primarily responsible for biological warfare. Protechnik Company was to develop the protective CBW equipment.

In 1983, RRL opened and started research on biological agents and on the biological effects of chemical agents. Daan Goosen became the first head of RRL and served until 1986. According to Gen. (ret.) Georg Meiring, South Africa developed a sophisticated and dispersed project. Project Coast was not just one individual and was not just RRL.⁵⁴ There were a number of different research and testing centers at universities and companies, and scientists in various parts of South Africa assisted Project Coast.

Anthrax, cholera, botulinum, and a variety of pathogens were collected and/or developed at RRL and elsewhere for testing. Apparently, a principal objective was to collect and test a range of biological agents in order to develop protection from a Soviet BW attack. In 1984, Dr. Schalk van Rensburg joined RRL and started the cholera research program. By the end of 1984, Project Coast and RRL had tested a range of BW toxins and had developed countermeasures to ricin and botulinum. Reportedly, they had acquired anthrax, Plague, cholera, E. coli, staph, necrotizing fasciitis, ricin, botulinum, gas gangrene, anti-matter bacteria, and the Ebola, Marburg, and Rift Valley viruses.⁵⁵ However, one must question if RRL had the facilities to keep Marburg, Rift Valley, and Ebola viruses.

Eventually, according to a number of sources in the U.S. and South Africa, Project Coast developed pathogens that had never before been seen. Project Coast managed to obtain the Soviet-developed flesh-eating bacteria, necrotizing fasciitis, as well as the antidote. In 1994, the South Africans surprised the Americans by revealing that they had the bacteria and then gave it to the U.S.⁵⁶ However, claims by Basson and former Surgeon General Knobel that South African espionage agents penetrated Soviet Russian programs during 1980s remain to be proven.

According to Tom Mangold in *Plague Wars*,⁵⁷ baboons, trapped up-country in Kruger National Park, were shipped by the crate load to RRL for biological tests. There is evidence that some of these tests were done in the

park itself. Tourists reportedly witnessed researchers using poison darts that took several hours to incapacitate or kill primates. The tourists registered their complaints and demanded that the practice be terminated. According to the Chief Warden of Kruger Park, the SADF used Kruger and other parks for military tests. However, Kruger Park officials were not told what was being tested, only what areas would be restricted and for how long. His impression is that more sensitive tests occurred on private reserves or Cape testing areas.⁵⁸

It appears that, from the start, Project Coast was not just a “defensive program.”⁵⁹ In the early 1980s, fears of a “black tidal wave” drove white scientists to try to develop a variety of means that could ensure the survival of white South Africa. Plans were devised to build a large-scale anthrax production facility at RRL. The anthrax could have been used either outside or inside South Africa, particularly where guerrillas were present. According to former RRL scientist, Mike Odendaal, who testified in the Basson trial, those plans were nearly operationalized in 1985.

Also, reportedly part of Project Coast was genetic engineering research, which was being conducted to produce a “black bomb,” bacteria or other biological agents that would kill or weaken blacks and not whites. The black bomb could be used to wipe out or incapacitate an entire area where an insurrection was taking place.⁶⁰ Project Coast scientists asked Basson to obtain a peptide synthesizer outside of South Africa that would assist in genetic engineering efforts.

Many aspects of Project Coast research projects, including the country's links with other states, have not and may never be uncovered. Research on birth control methods to reduce the black birth rate was one such area. Daan Goosen, the managing director of Roodeplaat Research Laboratories between 1983 and 1986, told Tom Mangold of the BBC that Project Coast supported a project to develop a contraceptive that would have been applied clandestinely to blacks.⁶¹ Goosen claimed that Dr. Knobel knew all about this project and those scientists had been told that this was the most important research on which they could work. Goosen reported that the project had developed a vaccine for males and females and that the researchers were still searching for a means by which it could be delivered to make blacks sterile without making them aware.⁶² Testimony given at the Truth and

Reconciliation Commission (TRC) suggested that Project Coast researchers were also looking into putting birth control substances in water supplies.⁶³

Project Coast claimed its first victims at the end of 1982, when “Operation Duel” was launched, which aimed to eliminate hundreds of SWAPO prisoners and SADF informants.⁶⁴ Col. Johan Theron, Counterintelligence Officer in the Special Forces, testified at the Basson trial that he received muscle relaxant pills from Basson in December 1982 and killed approximately 200 SWAPO prisoners, then dumped their bodies from airplanes out to sea. Also in Namibia, the Soviet Union accused South Africa of using herbicides. Napalm and phosphorous were allegedly used by the SADF in Angola during the 1980s, actions that were against the 1925 Geneva Protocol.

In November 1983, Basson was allegedly involved in the use of CBW against regime opponents in Dukuduku in KwaZulu-Natal. There he instructed South African agents to tie their intended victims to trees and smear a jell-like ointment on their bodies. When that failed to kill them, they were allegedly injected with an anaesthetic drug and then a muscle relaxant. After they had died, their bodies were thrown into the sea.

In 1985, four SWAPO detainees held at Reconnaissance Regiment headquarters were allegedly given a sleeping drug in soft drinks, taken to Lanseria airport outside Johannesburg and injected with three toxic substances supplied by Basson. Their bodies were thrown into the Atlantic Ocean.

In 1986, Basson is also alleged to have supplied poisoned tea and orange that killed Special Forces member Lance Corporal Victor de Fonseca in a military hospital in Pretoria. Fonseca is said to have started “talking” about clandestine operations after developing brain cancer. These acts were part of the 16 murder charges introduced on 26 March 1999, prior to the October 1999 opening of Basson’s trial in South Africa.

In 1984, uprisings in South Africa started in the Vaal Triangle, south of Johannesburg, and spread throughout the country. The mass actions were far more widespread, violent and deadly than in 1960 or after 1976. The nationwide scope of these protests intensified concerns over crowd control and fueled ongoing efforts to develop weapons, including chemical and biological agents, to deal with the unrest. SADF Chief of Staff, General Constand Viljoen, as well as Generals Liebenberg and Meiring, were seeking

an offensive CBW substance that would weaken and incapacitate rioters and was less irritating than tear gas. They consulted Basson and Project Coast. Also, the SADF sought a chemical that would color the skin for about two weeks and allow the identification of frontrunners in the violence.⁶⁵

In response to General Viljoen, Delta G Scientific developed a “New Generation Tear (NGT) Gas,” also known as CR gas. The NGT gas was designed to be more powerful than conventional CS tear gas and to incapacitate without lethality or excessive irritation.⁶⁶ NGT (CR) gas was intended to counteract rolling mass actions led by the ANC or its surrogates.

According to Gen. (ret.) Meiring, NGT (CR) gas was used rarely and only on the Chief of the Army’s say-so. When NGT (CR) gas was used, it was usually mixed with CS gas and solved in water to be used by water cannon.

Suspected Chemical Warfare in Angola, 1985-1989

In 1985, UNITA leaders made the first of several claims (between 1985 and 1989) that their troops had been attacked by chemical weapons (in this case, organophosphates) and asked SADF for assistance. In the 1985 incident, UNITA guerrillas reported that they had surrounded a town, and the Angolan government garrison had responded by using chemical agents.⁶⁷ In 1985, Col. Wouter Basson took command of the 7th SAMS Battalion and assumed overall responsibility for protecting SADF and UNITA forces from CBW attack. Therefore, Basson came to inspect the alleged CW attack. Lt. Col. Johann Smith, a SADF liaison with UNITA, assisted Basson and claims that convincing evidence of chemical weapons use was found.⁶⁸

In a second incident, in 1986, UNITA forces spotted a brown vapor, which they thought was mustard gas, and asked SADF for safeguards against CW. According to Gen. (ret.) Chris Thirion, who served in Angola off and on for 20 years, on a number of occasions between 1985 and 1988, the local population in southeastern Angola exhibited the type of disorientation indicative of CW.⁶⁹

UNITA claims and intelligence data heightened SADF fears of CBW attack in Angola, Namibia, and inside South Africa. According to Brig. Gen. (ret.) Bill Sass, former State Security Council member and SADF Chief of Operations, SADF had evidence that the Cubans actually brought their chemical warfare program to the battlefield as early as 1985.⁷⁰ According to

Gen. (ret.) Jannie Geldenhuys, SADF Chief of Staff, 1985-1990, the Cubans in Angola had the delivery capability and intention to use CBW, as indicated by radio intercepts.⁷¹ Cuban and Angolan army helicopters were shot down and were discovered to have had the capability to carry chemical agents. Captured Soviet advisers gave evidence about CW use. In addition, fears rose that ANC/MK guerrillas might put BW agents in South African reservoirs.⁷²

The need for protective equipment, clothing and antidotes and for CBW strategy and tactics intensified. Gen. Geldenhuys ordered counter-measures and the purchase of anti-CBW suits. P.W. Botha visited Angola and actually put on a suit. The cost for gear was expensive, especially gas masks, which were not reusable. Subsequently, Special Forces Gen. Liebenberg and Wouter Basson were investigated by the Office of Serious Economic Offenses (OSEO) in regard to 20 million rand in chemical warfare gear that was supposed to be, but never was, delivered to UNITA.

In Angola, the conflict reached a peak in October 1987, with the battle of Cuito Cuanavale. While Cuba and the Angolan government claimed a great victory, over 5,000 government troops were killed and advanced SAMs (SA-8s) were captured by the SADF who, subsequently, gave them to the U.S. According to David Steward, President de Klerk's chief of staff, 1989-1994,⁷³ Cuban and Angolan government forces used CW at Cuito Cuanavale and at Lomba River. A UNITA commander on the ground, Gen. Deon Ferreira, claimed that he saw a "flash in the sky," which was indicative of a CW attack. Later, UNITA troops were evacuated to Pretoria with their hair falling out.

Basson led the investigation and brought with him Dr. Heyndrickx from Ghent, Belgium. According to Gen. (ret.) Meiring,⁷⁴ other European scientists accompanied them. Heyndrickx's research project was done in loose collaboration with a clinic in Mavinga in southern Angola that was staffed by SADF personnel. Subsequently, Heyndrickx, as well as the South African government, accused the Angolan government of using CW. However, Heyndrickx refused to allow findings to be reviewed by his peers that MPLA used poison gas on UNITA in the Angolan war.⁷⁵

In the aftermath of Cuito Cuanavale, SADF planned to assist UNITA in retaliating for the 1987 CW attacks by firing NGT (CR) gas from 120mm mortars and 155mm howitzers. Tests were conducted at the SADF training

center.⁷⁶ In addition, according to Cuban officers who were interrogated, CW agents had been brought into Angola. An indication occurred at the beginning of 1988, when the 50th Havana City Brigade arrived from Cuba with anti-CW protective gear. As mentioned earlier, reports of CW use by SADF and by Cuban and Angolan government forces continued into early 1989, even after peace agreements were signed for the withdrawal of Cuban forces from Angola and SADF withdrawal from a soon-to-be-independent Namibia.

Plans for a Chemical and Biological Weapons Program

By 1985, several Project Coast program directors were planning for a massive escalation of the chemical and biological agents production program and working on plans that would have resulted in a weapons program. According to RRL scientist Mike Odendaal, he had received instructions to start a factory where biological agents would be produced in mass form, and 200,000 rand (\$100,000 in 1985 U.S. dollars) had already been spent on the plans.⁷⁷ A new wing had been added to Roodeplaat Research laboratories for a production-scale laboratory, with fermenters that could produce 300 liters or more of anthrax and other biological agents and a P-4 level laboratory. For the first few years, Project Coast used P-2 to P-3 facilities, and RRL only used two 10-gallon fermenters for growth medium. In 1985, when the new wing for RRL was built, a P-4 facility was added. Basson and his superiors in the SADF (Generals Liebenberg, Nieuwoudt, and Viljoen, as well as Magnus Malan) approved the up-grade.

According to RRL scientist Schalk van Rensburg, when Basson wanted the safety level raised to level 4, two British scientists, on an unauthorized visit from Porton Down, UK (which had been privatized) helped and advised.⁷⁸ According to Tom Mangold, MI-6 opened a file on Basson after he attended the Second World Conference of Toxicologists in Ghent, Belgium, where he reportedly met with scientists, including some from Porton Down.⁷⁹ Consequently, both American and British intelligence agencies knew of Basson's activities during this time but did little against him. However, there is no evidence, besides Basson's claims, that Basson ever visited Porton Down.⁸⁰

In the end, the directors of Project Coast decided not to fund the larger fermenters. According to Odendaal, SADF decided that biological agents would be used in low intensity regional skirmishes and assassinations, but not on a more massive scale.⁸¹ Therefore, in comparison to the USSR, which had scores of big fermenters, the South African program was quite small in size and scale. However, according to many American and South African experts, in terms of the range of biological agents possessed and the science involved, the CBW program was the “second most sophisticated program,” next to the Soviet program, and more sophisticated than the Iraqi program that was uncovered in 1995. In our interviews, no comparisons were made with the U.S. program that existed until 1969.

A senior former army officer confirmed that “any thinking person in the SADF” knew that South Africa had developed chemical weapons, at least by the mid-1980s.” He confirmed that South Africa was manufacturing chemical weapons from the mid-1980s until the “whole scenario changed” in the early 1990s.⁸² Earlier, the army had spent most of its time testing decontamination gasses. Also, at this time, several public statements about developing methods to counter chemical attacks appeared.

Weaponization began in cooperation with ARMSCOR, the state-owned arms producer, which developed unmanned aerial vehicles (UAVs) and missiles that would have the capability to carry chemical and biological agents. All of this was top secret, and the Americans and British only discovered weaponization in 1994. They did not insist that weaponization be included in the chemical and biological memorandum because they had no hard evidence upon which to make such a demand.⁸³ The South African Ministry of Defense still denies that weaponization took place.

While reports that the former South African government tested battlefield weapons capable of carrying biological agents and chemicals cannot be confirmed, there is evidence that such weapons were developed. Basson, much like his counterparts in other countries (e.g., Iraq), had difficulties developing effective delivery systems for using biological agents in mass casualty weapons. While Project Coast researchers undertook conceptual studies in the aerosolization of biological agents, the evidence available to date indicates that sophisticated aerosolization delivery systems were not developed. However, conceptual studies of such systems were well underway at the time Project Coast was shut down. Much more progress appears to have been achieved developing

sophisticated artillery warheads and tactical missiles that were capable of delivering NBC warheads. What types of missiles and warheads were built, possibly tested and sold abroad remain among the most important questions related to South Africa's NBC programs still to be answered.

Project Coast and the Nuclear Weapons Program Compared

From the start, Project Coast had a secretive military culture that was impervious to scrutiny by civilian authorities. Project Coast was more compartmentalized, secretive, and loosely managed than the nuclear weapons program, which was controlled by ARMSCOR. A professor who worked on the nuclear weapons program claims that the highly technical nature of the nuclear weapons program required that it should be well controlled.⁸⁴

The nuclear weapons program was militarized in the late 1970s but remained under the control of ARMSCOR. Many of the nuclear scientists who worked on the nuclear program did not know about the CBW program and were surprised to learn that South Africa had one at all.⁸⁵ As the money required to support P.W. Botha's covert projects was considerable, especially for the nuclear and missile programs, the budget of the regular SADF forces was increasingly squeezed. By the end of the 1980s, this money crunch was creating tensions between the top professional military and the "securocrats." Concerns of senior professional military leaders about the adverse effects on the air force, navy, and army, if "P.W. was allowed to continue developing his toys," was a major factor fueling support to unilaterally close down the nuclear program.⁸⁶ The conventional military leadership were less concerned about the costs associated with the CBW program. As Brig. Gen. (ret.) Bill Sass, a member of the former State Security Council recently observed, "details of Project Coast were not widely known among members of the SADF leadership."⁸⁷

Internal Unrest and Project Coast

In June 1985, a state of emergency was declared in South Africa, as the indigenous uprisings intensified. The government's perceived need for crowd control agents intensified. General Viljoen asked his fellow generals how the SADF should respond to "fighting in the streets." One proposal was

for a “third force” to be created to take on this task. This force would supposedly combine the military functions of the SADF and the police role of the SAP in suppressing unrest.⁸⁸

Another proposal was to use non-lethal chemical weapons, particularly in the form of the new tear gas [NGT (CR)], which Project Coast had developed. General Liebenberg revealed that chemical agents were being developed to make people passive and to render equipment unusable. Gen. Lothar Neethling, South African Police forensics commander, ordered the development of tear gas, gas grenades, and tranquilizing drugs for use in pacifying rioters. Neethling was also an expert in use of CBW for assassination and worked closely with Basson, who supplied poisons to get rid of individual opponents of the regime.⁸⁹ By 1986, the state of emergency led to massive waves of arrests and detentions in South Africa. In response, the ANC/MK vowed to “make the streets ungovernable.” The SADF proceeded with efforts to develop and apply CBW agents to counteract the “black onslaught.”

The 1984-86 township unrest produced antipathy between military and civilian departments. In essence, the State Security Council, the SADF, and SAP took over the state. Civilian departments were subordinated to the State Security Council. Even the Education departments began to take orders from the SSC. At this time, the security forces perpetuated the doctrine of “plausible denial.” Security forces carried on activities in secret, which allowed civilians to deny knowledge.⁹⁰

In 1986, the Civil Cooperation Bureau (CCB) was created, drawing on the “dirty tricks” experiences of the Selous Scouts and D-40. The CCB became one of the cornerstones of an alleged “third force” that was dedicated to preventing the ANC/MK from taking power. There was a consensus in the Botha government that unconventional methods were needed, according to Malan’s testimony before the TRC, and that Malan personally approved establishment of CCB but never gave it instructions to have anyone killed. Malan denied the existence of a third force and refused to apply for amnesty from the TRC. However, he said he would apply for collective responsibility with the ANC leadership for acts committed during the violence that started in 1960. Similarly, former Air Force General Tienie Groenwald said he would apply for amnesty for “clandestine operations” of the Afrikaner Volks

Front. He acknowledged this body had connections with pre-1994 election bombings, but that his involvement was limited to military operations.

By 1987, the uprisings by black youths in South Africa had largely come to an end. As mass actions subsided, ANC/MK guerrillas stepped up their armed campaign, which came to include the bombing of civilian targets. While the Botha government sought ways of eliminating the guerrilla threat, negotiations between the *apartheid* regime and Mandela continued. In response to the ANC/MK and other perceived threats, the CCB started operations in 1988. According to the Steyn Report and a number of interviews, Basson worked with the CCB, had offices in the same building, and supplied them with CBW poisons for assassination purposes. The Steyn Report also found that Basson and the CCB were receiving instructions from Malan and other superiors. However, Basson and the CCB interpreted the instructions as they saw fit.

International Links Established During Project Coast

From 1981 onwards, Basson and Project Coast scientists intensified their international contacts, particularly at conferences on CBW. South African delegations made visits to the U.S., Britain, Taiwan, Israel, and Germany. Basson attended a conference on biological warfare (BW) in San Antonio in 1981. From 1981 to 1986, the Reagan administration followed a policy of “constructive engagement.” Reagan administration officials sent signals to the Botha regime that the U.S. was willing to turn a blind eye to American industries and scientists as the South Africans built up their defense industries. Under-Secretary of State William Clark went one step further and welcomed South African defense officials and experts to Washington and facilitated their interaction with U.S. counterparts. The attitude of Clark and others enabled South Africa to gain access to U.S. scientists. At the same time, Basson’s trip to San Antonio reportedly attracted the attention of American intelligence, and he was barred entry to the U.S. for scientific purposes.⁹¹

In 1984, the U.S. Centers for Disease Control (CDC) sent eight shipments of the Ebola, Marburg, and Rift Valley viruses to South Africa. The CDC was concerned with outbreaks of Ebola and other viruses and sought South Africa’s assistance in preventing their spread. While CDC

motives were benign, suddenly, South Africa possessed viruses that could be used with devastating effect in surrounding countries.

Details of the extent and importance of South African cooperation with Israel in CBW research have not been disclosed. The two countries started working together on covert research related to nuclear weapons after World War II. These links developed into a mature working relationship by the 1970s. Bilateral cooperation between the two states proved especially fruitful in developing nuclear weapons and testing a number of increasingly sophisticated missiles. Israel and South Africa also cooperated closely in the production of the G-5 artillery gun to fight a conventional war.⁹² This line of research that cost millions of rand also explored the feasibility of using NBC warheads for the G-5, and later the G-6 gun. The Israelis also helped South Africa with armored cars and tanks and the Cheetah (a Mirage offshoot). Given the breadth and depth of cooperation, it is quite possible that Israel and South Africa cooperated on CBW efforts. It is significant that Basson went to Israel several times during the 1980s.⁹³

Transnational Links: The Ford Case and Basson

New questions surfaced about the *apartheid* government's international connections and interest in biological warfare and birth control methods in early 2000, after Pat Riley, one of the owners of a southern California biotech firm, BioFem, was shot and after his partner, Dr. Larry Ford, committed suicide. The Irvine, California police had questioned Dr. Ford about his partner's shooting and, after Ford's suicide, found documents in his house that led them to dig up his backyard. Although not all of the contents found have been disclosed, published accounts indicate that the police removed automatic rifles from a concrete bunker and tubes of cholera and typhoid fever germs from a freezer in the Ford house.

At the time of his death, Ford was working on a "microbicide" form of birth control that he had patented in 1997. Ford claimed that his product, "Inner Confidence," could prevent millions of people from dying of AIDS, especially in Africa, and in the process make investors extremely wealthy. His microbicide contraceptive was a vaginal suppository that contained chemicals that kill germs transmitted through sex, as well as sperm. The potential advantage of this type of contraceptive would be to protect the user

from HIV and other sexually transmitted diseases. To date, no microbicide product has been approved for marketing. There was little interest in this birth control approach until the late 1990s, as several technical problems remained unsolved. The results of several small-scale trials, and one large scale publicized study of another microbicide found that the chemicals in the microbicide damaged the lining of the vagina, making the user more, rather than less susceptible to HIV infection.⁹⁴

Local authorities and the FBI, who launched a weapons of mass destruction investigation into this case, began investigating claims Ford made to his associates and friends that he served as a consultant to the SADF and had close ties with the CIA. Former South African Surgeon General, Dr. Niels Knobel, initially confirmed that he met Ford at a conference in San Diego, California in the late 1980s and that they had remained friends ever since. Knobel also confirmed that they shared an interest in AIDS, because they both knew that the epidemic was going to have a devastating impact in Africa. However, Knobel recently acknowledged that he met with Ford and his associates, during one of their many visits to the South African trade representative's official residence in Los Angeles.⁹⁵ In a recent phone interview, Knobel stated, "Our whole policy of protecting members of the defense force against HIV (educating them to use condoms) came from my relationship with Larry. We both worked toward a cure for AIDS that would be available to the vast population of Africa, (and) there was no political agenda."⁹⁶

Others reported that Ford visited South Africa several years earlier than Dr. Knobel acknowledged. According to Dr. Scharf, the former head of Military Hospital One in Pretoria, Ford visited in the mid-1980s as a guest of the South African Surgeon General. Dr. Scharf remembered a visit by Ford to his hospital as the guest of Knobel in 1984 or 1985. Knobel insisted that Ford be given VIP treatment (at the hospital's expense). Scharf was offended by Ford's request for human placenta that he wanted to use in his research on viruses. Scharf refused to cooperate and claimed that he threw Ford out of his office, after warning him that such activities would be very controversial, if they became public, due to the fact that all Africans viewed babies as sacred.⁹⁷

Recently, Knobel confirmed to American reporters that he helped Ford establish protocols to test his product in South Africa but said he did not

know if those trials were every carried out. According to microbiologist Mike Odendaal, researcher at RRL, Ford also visited South Africa again in 1987 to instruct scientists working with a SADF front company on how to turn teabags, doilies, and pornographic magazines into “weapons” that could be used against the ANC by using a species of clostridium bacteria. Odendaal reported that the scientists found much of Ford’s advice confusing and some went so far as to call him a fraud.⁹⁸

Police investigating this case have been unable to corroborate many of Ford’s claims made before his death. For example, Ford claimed that he parachuted into southern Africa during the *apartheid* era to take blood samples from dead guerrilla fighters in order to help the U.S. government determine the biological warfare agents against which the Soviets were vaccinating their allies.⁹⁹ Another long-time Ford associate, Jerry D. Nilsson, also came under investigation. Nilsson claimed that he and Ford traveled to Africa together. In 1988, Nilsson organized a group of doctors, including Ford, to buy a defunct Los Angeles hospital. The plan was to turn it into a state-of-the-art infectious disease research center, the Lake View Terrace Institute. Nilsson told the Los Angeles Times that the facility was to be “one cog in a complex, far-reaching project” with related facilities in Africa, Germany, Italy, and Britain. The scheme flopped when research groups denied they were backing the venture.

The nature of Nilsson’s relationship with Ford has remained unclear. Police seized considerable material when they raided Nilsson’s house and storage lockers but did not release details of the searches. Nilsson’s friends claimed that he and Ford stashed chemicals and germs at several locations in southern California. Police acknowledged that the evidence strongly suggested that Dr. Ford was deeply involved in a conspiracy and that he would be in custody today were he alive. Another long-time associate of Ford claimed that only about one per cent of the story of Ford’s activities in Africa has been disclosed.¹⁰⁰

In July 2000, an Orange County, California grand jury heard evidence to determine the facts in the Ford case. Evidence pointed to Ford’s links to the former South African regime as part of a larger network with officials of the former government and perhaps with rogue elements. The FBI opened an international investigation to determine whether any crimes under U.S. law had occurred in South Africa. Ford claimed to have served as a consultant

to the South African government, lecturing scientists on biological topics relevant for making BW. If true, his actions would have constituted a violation of U.S. laws, which prevented such contacts during the *apartheid* era.¹⁰¹

The results of a closed grand jury investigation of the Ford case have not been made public, but the discovery of biological agents and toxins in Ford's possession renewed questions about whether Basson called upon former associates to conceal biological agents, poisons, and drugs overseas. Testimony at the Basson's trial to date has failed to explain where tons of drugs and smaller quantities of deadly toxins whose production Basson oversaw before his retirement from the military in 1993 went and why so many drugs were produced in the first place. One of the prosecutors in the Basson case has acknowledged that the prosecution still does not have a very clear idea about either the purpose of the drugs or their final destination.¹⁰²

At the time of Basson's arrest, investigators found several trunks in his possession that contained documents and items related to Project Coast.¹⁰³ The investigators also found a great deal of personal correspondence between Basson and individuals in Switzerland, the United Kingdom, and other countries in the trunks and among Basson's personal effects. One letter was from an individual in the UK, who lived near Heathrow Airport. This letter described what Basson should do if he needed to leave South Africa quickly. The letter said he should contact "them" when he arrived at Heathrow and that "we will collect you." Other letters, from individuals in other countries, described similar emergency exit plans.

The identity of this letter writer and others was not known by the investigators representing the Truth and Reconciliation Commission (TRC), the South African President's office, or the National Intelligence Agency (NIA), who were all present at the time after the trunks were found. The contents of the trunks were itemized, and the National Intelligence Agency (NIA) took control of them for security reasons. The chief investigator for the TRC at the time, Dr. Villa-Vicencio, never learned whether these letters were from private individuals or representatives of governments.¹⁰⁴

The documents are interesting, given statements made by Juergen Jacomet, a former Swiss military intelligence agent, who worked with Basson on money-laundering for Project Coast in Europe. He spoke of a right-wing

conspiracy and alluded to the existence of an information organization of individuals, including Americans.¹⁰⁵ The death of Dr. Ford and revelations of his South African involvement, and his failed effort to establish the Lake View Terrace Institute raised again the possibility of a right-wing international network, united by a vision of a South Africa once again ruled by whites.

No evidence to date has been found to substantiate concerns expressed by some about possible linkages between Project Coast programs and the intentional use of HIV or microbicide contraceptives.¹⁰⁶ However, the recent revelations since Ford's death have been consistent with reports that the former South African government was already concerned about the future impact of the AIDS epidemic by the mid-1980s. In the 1980s, as the South African government became more aware of the magnitude of the impending AIDS epidemic, the SADF started testing thousands of SADF soldiers for HIV. The secret right-wing *Afrikaner* organization, the Broederbond, also recently acknowledged that they had completed population projections during the mid-1980s. They suggested that whites would be in majority in the future due to the devastating effects that AIDS was projected to have on the black population of South Africa.¹⁰⁷

Throughout the 1980s, Basson continued his foreign visits and interaction with experts from the U.S., the UK and other countries. Most contacts appear to have been legal ones between Project Coast scientists and other scientists and consultants in Europe. Most of the substances and knowledge relevant to biological weapons were not controlled in the 1970s and 1980s as there was not the same level of concern with the possible use of biological agents and chemical substances that emerged during the 1990s.¹⁰⁸ However, Basson and Knobel subsequently claimed that Basson visited Iraq and Iran, the Philippines, North Korea, Croatia, and met with members of Colombian drug cartels, making contacts and collecting information. What was obtained or exchanged during these visits has not yet emerged.

Corruption and the Deterioration of Project Coast

Basson took advantage of the loose financial oversight and accountability requirements to ensure that he would acquire large sums of

money from the project several years before the actual decisions were made to privatize these state-owned corporations. Starting in the mid-1980s, if not before, Basson was reported to have offered his friends and trusted employees the opportunity to invest in a number of these official front corporations. Basson and other early investors made overnight fortunes, when these corporations were privatized in the late 1980s.¹⁰⁹ The magnitude of these profits, perhaps more than any other action, caught the attention of a non-military agency, the Office of Serious Economic Offenses, who started investigating the financial flows associated with Project Coast soon after these corporations shares were sold on the open market.

Basson was the central figure in coordinating the funds and the whole program. He was the central point of contact between the scientists, the army, and the government sponsoring Project Coast. As the project expanded into sophisticated research, genetic engineering, and the manufacturing of large amounts of Mandrax and Ecstasy (which may have been sold on the black market), millions of dollars were siphoned off into a series of elaborate holding companies. While Basson continues to maintain that the large amounts of Mandrax and Ecstasy that were produced by state-owned companies were authorized products intended for use in crowd control, few observers, including the prosecution in his ongoing trial, believe this story.¹¹⁰ Instead, a mystery remains about why so many drugs were produced and where they went.

As Basson and his closest associates skimmed millions of dollars from Project Coast activities, he and his American accountant, David Webster, developed an elaborate web of foreign shell companies to launder the money. Several offshore holding companies, such as WPW Investments that was incorporated in the Cayman Islands in 1986, sold initial share offers at low prices (e.g., \$4.00 U.S. per share) to Basson. In this company, as in numerous others, Basson's accountant, David Webster, was the Director while Basson maintain indirect control as a member of the Board. Towards the end of Project Coast, new companies were being incorporated and large amounts of assets were being transferred from existing companies to the new ones over a 24 or 48 hour period.¹¹¹ The investigation of the South African forensic auditor, Hendrik Bruwer, took nearly seven years to complete. After traveling to the U.S., UK, Belgium, Switzerland, Croatia, and Luxembourg,

Bruwer produced an 800-page report that highlighted serious illegalities in the SADF and former government.

Obtaining permission from foreign governments delayed the investigation, as these on-going investigations by other national and provincial bodies (e.g., the Transvaal Auditor General's office). Basson's American accountant, David Webster, who had acted as a nominee for Basson, at first refused to hand over papers in his possession to South African investigators. He was eventually forced to do so by an American court. The international and transnational character of this case was highlighted by the fact that the Basson trial took the unusual step of holding sessions of the trial in Jacksonville, Florida in September 2000 in order to establish the exact nature and extent of David Webster's involvement in the case. The complexity of these dealings are such that the prosecution believes that it will take most of the two years that the Basson trial is expected to last to present evidence to support fraud charges against Basson.¹¹²

Project Coast ground to a halt in 1988, due to corruption by Basson and others. According to interviews with Project Coast scientists, between 1982 and 1987, Project Coast was advancing as a sophisticated program.¹¹³ Project Coast had acquired anthrax, cholera, botulinum, and other biological agents, was planning to add a wing to RRL to produce massive amounts of anthrax, and was proceeding with genetic engineering research to produce germs that would harm blacks and not whites. However, as the communist threat receded in 1987-88 and as it seemed possible that the *apartheid* regime's days were numbered, Basson and others took large amounts of money that was intended for Project Coast programs and diverted it to their own accounts. Elsewhere in government, top officials were taking funds on a large scale. As the biological warfare program stopped, Basson and others began to plan how to roll Project Coast back in such a way that would be advantageous to them. By 1988, President P.W. Botha, Magnus Malan and Wim de Villiers of ARMSCOR had initiated the privatization and liberalization of the defense industry. They envisaged a transfer of power to Mandela and the ANC and saw the need to keep the defense industry out of their hands. The privatization process opened the door to the type of corruption exhibited by Basson and his colleagues.

In 1988, Basson was supposed to have bought a sophisticated peptide synthesizer for \$2.2 million from clandestine sources. Project Coast

researchers were attempting to make significant advances in the field of peptides to alter brain function, which was a key to creating a biological weapon that would affect blacks and not whites. However, at the trial of Basson, Dr. Lucia Steenkamp, a Project Coast scientist, refuted claims that Basson had bought the peptide synthesizer, and the prosecution alleged that Basson defrauded SADF by pretending he needed the synthesizer but actually used the money for overseas business deals.¹¹⁴

In August 1988, Delta G scientists arranged for 1,000 kilograms of methaqualone to be produced. The production manager at Delta G approached Dr. Philip Mijburgh, managing director of Medchem Consolidated Investments, and asked him to produce the methaqualone. What happened to the methaqualone and whether or not it was encapsulated remains unknown.¹¹⁵ The explanation given by witnesses at the Truth and Reconciliation Commission (TRC) hearings in 1998 was that the methaqualone was to be mixed into NGT (CR) gas and used for crowd control purposes. General Lothar Neethling testified that, on three occasions, he had been requested to provide Dr. Basson with Mandrax tablets confiscated by the South African Narcotics Bureau (SANAB). He claimed that he had given Dr. Basson approximately 200,000 tablets in total as well as quantities of LSD and dagga (marijuana), on the understanding that they would be investigated to determine whether they would be appropriate crowd control weapons. None of the witnesses could provide the TRC with any information about tests that had been conducted in this regard, and at least one witness stated that these drugs would not be suitable for such a purpose. Medchem's role is noteworthy given the fact that Defense Minister Malan's nephew, Dr. Mijburgh, was on the board. Mijburgh benefited from privatization of both Medchem and Delta G Scientific in the early 1990s.

In 1988, Dr. Knobel became Surgeon General, after Dr. Nieuwoudt died. Basson briefed Knobel, claiming that he had penetrated facilities in the USSR, Libya, the U.S., and UK (Porton Down). He also claimed to have entered facilities and contacted scientists in Belgium, France, Switzerland, Germany, and Israel. Knobel still believes Basson's claims. However, in retrospect, Knobel found that Basson's activities were not sufficiently monitored and that the working group committee approach to supervision was a mistake.¹¹⁶ According to Gen. (ret.) Geldenhuys, as the 1980s proceeded, Project Coast continued to be managed by committee, which left

it susceptible to mismanagement and corruption.¹¹⁷ Geldenhuys attended the steering committee for Project Coast on one or two occasions from 1985-1990. Usually, Geldenhuys was replaced by Surgeon General Nieuwoudt and, from 1988-1990, by Dr. Knobel. He also attended meetings of the satellite program on missiles. The problem was that a committee could not control Basson.

According to Geldenhuys, General Liebenberg was convinced that the Project Coast steering committee (of which he was a member) was supplanted by the "Small Command Council," especially in review of finances and in working with Basson. The Small Command Council was controlled by Malan and was for secret projects on a "need to know" basis. In contrast to his TRC statements about Project Coast, Gen. (ret.) Geldenhuys now claims that, as SADF Chief of Staff, he monitored finances and that his chief of finance was good. He claimed that there was not disproportional spending on Project Coast and that secret funds were audited. Geldenhuys pointed out that, in the 1980s, South Africa was the "skunk" of the world. This led to an "unconventional arms trade" and to the use of middlemen and secret funds. However the Office of Serious Economic Offenses (OSEO) objected to secret funds, as well as "safe houses," clandestine front companies and clandestine flights.¹¹⁸

IV. Rollback of Project Coast, 1988-1994

In 1988, conditions for the rollback of the CBW program, Project Coast, improved dramatically, as the pace of change accelerated in South Africa and southern Africa. President P.W. Botha and the South African Defense Force (SADF) realized that the Soviet Union was crumbling and knew they were going to win against the Cubans in Angola.

Suddenly, P.W. Botha changed his position and accepted a change in strategy. The goal became minimal destruction, using cross border raids, and not defeat of the regime's adversaries. As Botha realized there was a greatly reduced external threat, he agreed to enter into negotiations, which had started at a lower level in 1986, to reach a compromise with Nelson Mandela and the ANC. In 1988, the U.S., Cuba, Angola, and South Africa negotiated the withdrawal of Cuban troops in exchange for the independence of Namibia, and by the end of the year, a deal was reached. The Soviet and Cuban threat that had helped give rise to Project Coast rapidly began to recede. However, the ANC/MK continued their guerrilla campaign, including the bombing of civilian targets.¹¹⁹

At the beginning of 1989 President Botha suffered a stroke and was replaced on an interim basis by F.W. de Klerk, an "outsider" to the state security system (including Project Coast). In April 1989, South African troops were confined to barracks in Namibia and were withdrawn by the end of the year. In September 1989, de Klerk was elected and inaugurated as State President and shunted Botha aside. De Klerk began his own five-year plan of ending *apartheid*. Part of his task included trying to establish civilian control over the security apparatus and reining in the "securocrats" and secret projects (like Project Coast). Talks with Mandela reached their climax, and top ANC prisoners, such as Walter Sisulu, were released. Finally, in February 1990, de Klerk lifted the ban on the ANC, PAC, and South African Communist Party, and released Nelson Mandela.

De Klerk's decision to release Nelson Mandela and lift the ban on the ANC initiated a four-year period of negotiation and contention. In 1991, the Conference for a Democratic South Africa (CODESA) process of negotiations began, involving the government, the ANC and other parties.

In 1992, the negotiation process slowed and concerns mounted as the campaign of rolling violence spread throughout South Africa. Violent clashes continued, especially in Kwazulu-Natal. At the same time, mistrust of de Klerk and the National Party government grew among ANC leaders. There was a real concern by all parties that the situation in South Africa would “spin out of control” before a negotiated settlement was reached.¹²⁰ The fear of collapse ultimately provided an important incentive that eventually brought most parties back to the negotiating table. In 1993, negotiations stalled, and violence continued. Chris Hani, leader of Umkhonto we sizwe (MK) and the South African Communist Party, as well as a possible successor to Nelson Mandela, was killed in a right wing hit operation. The fear of a “third force” and a right-wing coup continued.

During this period of negotiations, instability and violence, many in the regime believed that they needed insurance against the ANC/MK and the “black onslaught.” With this in mind, the CBW program was kept intact by Basson and his associates as insurance and was used in assassination attempts. Also, experiments with chemical warfare apparently continued, with an alleged attack on Mozambican troops as late as January 1992. At the same time, Basson, Philip Mijburgh and others were in the process of milking Project Coast for all the financial gain possible.

Basson began to establish contacts with foreign governments, such as Libya, which might be interested in purchasing CBW secrets. Soon, Basson became the target of investigation from the National Intelligence Service (NIS), SADF counterintelligence, and the Office of Serious Economic Offenses, as well as the CIA and MI-6. The investigations culminated in the Steyn Report of December 1992.

De Klerk's Efforts to Roll Back Secret SADF Projects

When de Klerk became President in 1989, he sought to find out about the secret projects of the SADF, including the nuclear weapons and CBW programs. On 30 July 1989, President de Klerk announced formation of the Kahn Committee. It issued three interim reports, and a final report on 19 November 1991. Its mandate was limited: the committee considered only projects brought to its attention by the various state departments that were still operative, with a view to recommending the cancellation of covert

activities wherever possible. Where the committee was of the opinion that projects should be allowed to continue, recommendations were to be made for the possible scaling down and, where necessary, adaptation of such projects. The committee was requested to ensure that projects did not benefit any particular political party or organization. Projects that were not terminated were to serve what was defined as “the national interest.” Such activities were said to include the elimination of violence, intimidation, sanctions and international isolation.

However, the Kahn committee, because of assurances given to De Klerk from Knobel and Basson that the CBW program was defensive, did not investigate Project Coast. According to Dr. Ian Phillips, ANC defense expert, the explanation for de Klerk’s lack of knowledge about the CBW program was institutional. The Minister of Defense, Magnus Malan, was not served by a civilian Department of Defense that administered the SADF. Military personnel held all the top positions that should have been filled by civilians. Consequently, the flow of information was curtailed by secrecy. De Klerk claimed that Malan had kept information about the CBW program secret. P.W. Botha and Malan ran the State Security Council with no distinction between strategic and tactical levels. They approved projects and let the operatives proceed to carry them out as they saw fit. In sum, the *apartheid* regime had no conception of civil-military relations.¹²¹

After de Klerk lifted the ban on the ANC and freed Mandela, he addressed the SADF and SAP. De Klerk stressed that the ANC was now a party and not the enemy. Needless to say, many in the security forces did not like the message. On 26 March 1990, President F.W. de Klerk was briefed by Surgeon General Knobel about the defensive side of the CBW program, such as gas masks and protective suits. Knobel informed de Klerk about work with lethal chemical agents, and in response, de Klerk ordered Knobel to stop work on the lethal agents. However, de Klerk was not provided with all of the details about Project Coast, especially about the offensive aspects of the CBW program and its use in assassination activities. The same was true with other SADF projects and “third force” activities.¹²² Only with the Steyn Report at the beginning of 1993, did de Klerk become aware of the skill, sophistication, and offensive nature of Project Coast.

According to General (ret.) Meiring, the CBW program was still needed after 1990, due to problems of crowd control and the possibility that the

ANC/MK had CBW.¹²³ At the same time, once de Klerk decided to roll back Project Coast, the process was time-consuming due to the sophistication of the program. Scientists and researchers had to be laid off over a period of time. Also, South Africa did not want to attract attention.

According to Pierre Steyn, former Secretary of Defense, another major impediment to dismantlement was the bloated military that had developed throughout the 1980s. This meant that the government faced a “situation of insubordination in the military by 1992.”¹²⁴ In response to de Klerk's order, intelligence procedures were restructured and personnel changes were made but police investigations were never able to flush out all the details of what was happening. Throughout the military, there was stonewalling.

Proliferation and Counterproliferation

At the beginning of 1990, the US, backed by Britain and Israel, issued a strongly worded “hostile nation warning” on rolling back the South African nuclear weapons program.¹²⁵ With the prospect of the ANC taking power, the U.S., the UK and Israel did not want to see the program's assets or secrets being sold to adversaries in the Middle East or elsewhere. De Klerk was persuaded by the ultimatum, especially as he saw no future need for nuclear weapons. In addition, South African officials were being forced by the U.S. to take a stand on the Non-Proliferation Treaty (NPT), in time for the June 1990 NPT review conference. According to Prof. Andre Buys, in early 1990, de Klerk decided to end the nuclear program.¹²⁶ It took three years (1990-93) to dismantle. Documentation, diskettes, and hard drives were destroyed. De Klerk appointed Prof. Mouton as the auditor to supervise the disarmament process. From 1990-93, “Operation Masada” was carried out by the government and involved shredding of documents and destroying of hard drives relating to the nuclear weapons program and Project Coast.¹²⁷

In contrast to the nuclear weapons program, no pressure was exerted in 1989 or 1990 over the CBW program, even though the CIA released a report in 1989, which placed South Africa on a list of countries that had developed and stockpiled chemical weapons. However, the main focus of concern for the United States and her allies was nuclear proliferation. For a brief time, between 1987 and August 1990, when South Africa sold the G-6 155mm gun and chemical warfare agents, including NGT (CR) gas, to Iraq, the United

States became concerned about the proliferation of a conventional weapon that had the capability to throw “exotic” shells.¹²⁸ However, there was little or no interest among U.S. policy and intelligence communities about possible proliferation threats associated with South Africa’s biological warfare program.

The information that the CIA and MI-6 possessed was widely circulated or available within the Bush administration or the Thatcher/Major governments. This lack of interest changed in 1993, as the U.S. learned more about South Africa’s CBW and missile programs. Wouter Basson’s trips, particularly to Libya, and access to an informant, who provided the U.S. and allies with key details of Project Coast, increased the interest and concern of the United States, Great Britain, and other allies. The new information led the U.S. and Britain to issue a *demarche* in April 1994. Israeli officials probably knew more about the program but did not want the U.S. and Britain to know that they were involved with it.

According to Gen. (ret.) Chris Thirion, as the head of SADF intelligence, he was asked for access to Project Coast secrets by good friends overseas.¹²⁹

These included professional contacts in Germany, the U.S., Switzerland, and Austria. Also, top South African authorities, Generals Liebenberg and Meiring asked him if he could put Basson in touch with the right people. He refused to ask his U.S. counterparts, because he customarily met with them collectively and thought it would be awkward to ask.

In the 1980s, Thirion built a good relationship with his U.S. counterparts and cooperated with them in investigating the Soviet-built SA8 surface-to-air missile, after the SADF had captured it. He provided information about the G-5 gun to American counterparts, even though ARMSCOR was on bad terms with the U.S. government. Thirion did not want to jeopardize his relationship with the U.S. by mentioning Basson. However, he did ask a Swiss agent one-on-one if he would be interested in meeting Basson. The agent replied that the Swiss government was indeed interested. Thirion was interested in defensive measures and encouraged the Swiss to put together a team of doctors and send them to Angola.

In 1991, U.S. embassy officials, including the defense attaché, discovered at an arms show that South Africa was running a CBW program, including gas masks and protective suits.¹³⁰ The Americans asked the South Africans about the CBW but elicited little response. Later, an American

delegation was invited to visit Protechnik to view facilities producing CBW protective gear. By September 1991, the U.S. government (and not just the CIA) became aware of Basson and Project Coast and began to look for signs of proliferation, especially to ANC allies, such as Libya.

Continued “Third Force” Activities and CBW Use

In 1989 and the early 1990s, violence escalated inside South Africa, in spite of the unbanning of the ANC and the release of Mandela. The ANC/MK reserved the right to resume their urban guerrilla warfare campaign, and violence between ANC and Inkatha supporters escalated in Kwazulu-Natal. In this atmosphere of violence, the CCB and other “third force” agents intensified their murderous activities.

In April 1989, the CCB attempted to assassinate the Reverend Frank Chikane with poison during a trip to Namibia.¹³¹ Another attempt was made during a trip to the U.S, where one doctor finally diagnosed his malady as organophosphate poisoning. According to the testimony of RRL scientist, Schalk Van Rensburg, to the TRC, the men who tried to kill Chikane with Parathion had poor intelligence. He stated, “They were counting on little (*sic*) forensic capability in Namibia. And too little was smeared over his underwear to kill him when he went to the U.S.”¹³² Chikane’s attempted assassination and several other CCB incidents illustrate the difficulties involved in using biological agents as methods of assassination.¹³³

CCB operative Petrus Jacobus Botes (who claimed to have also directed operations by the CCB in Mozambique and Swaziland) asserted that he was ordered, in May 1989, to contaminate the water supply at Dobra, a refugee camp located in Namibia, with cholera and yellow fever organisms. A South African army doctor provided them to him. In late August 1989, he led an attempt to contaminate the water supply. However, the attempt failed to have any effect because of the high chlorine content in the treated water at the camp.¹³⁴

In May 1990, a South African newspaper, *Vrye Weekblad*, reported that a South African government covert operations unit, known as the Civilian Cooperation Bureau (CCB), employed biological agents against South West African Peoples Organization (SWAPO) members. According to this article, the CCB had nearly 300 people working for it, and reportedly consumed

about 0.28 per cent of the entire South African defense budget. Reportedly, the group had authority to operate inside South Africa and in neighboring countries and was disbanded at the end of 1990.¹³⁵

In 1990, violence in KwaZulu-Natal and other parts of South Africa escalated, with assistance provided to Inkatha militants from the CCB and other “third force” agents. In response to rising evidence of third force activities, the Harms Commission was established in 1990 and was charged by President de Klerk with investigating third force agencies, including the CCB and *Vlakplaas*. As the CCB was being terminated in 1990, CCB operatives absconded with more than R12 million (\$4 million in 1991 U.S. dollars) that was due to Mechem (the explosives warfare company) for teaching advanced demolition techniques.¹³⁶

According to David Steward, F.W. de Klerk’s chief of staff, these third force activities came as a surprise to de Klerk. In spite of the evidence, the 1991 Harms Commission lacked teeth and was unable to uncover many of the secret projects and third force activities that were going on in South Africa. In early 1992, Project Coast was still operating against the regime’s “enemies.” According to TRC testimony, Jan Lourens of RRL and Trevor Floyd of the CCB allegedly took poisoned screwdrivers to London with plan to kill ANC leader, Plovo Jordan and SACP/ANC military leader, Ronnie Kasrils. Basson allegedly developed “poison beer” to be used against South African blacks.

Privatization, Corruption, and Drugs

In April 1990, Minister of Defense Malan decided to privatize Roodeplaat Research Laboratories and Delta G, and Protechnik. Since de Klerk had made the decision to start rolling back Project Coast, the Ministry of Defense and SADF could no longer afford to sustain the three companies and their employees. However, the privatization proceeded with insufficient government oversight. In three years, Project Coast operatives pocketed state assets totaling more than R50 million (\$17 million in 1990 U.S. dollars), all for an investment of as little as R350 000 (\$120,000 in 1990 U.S. dollars), and attracted the attention of the Office for Serious Economic Offences (OEO). Among the chief beneficiaries was former Special Forces soldier Philip Mijburgh, nephew of Magnus Malan.¹³⁷

In July 1991, commercialization and privatization were put in motion. Malan ordered all research stopped by the end of August. Contracts with SADF were cancelled. The ownership of RRL and Delta G Scientific were transferred from Ministry of Defense to managers and scientists. OSEO investigator Fouche testified to the TRC in 1996 that a five-year research contract between the SADF and RRL was canceled by the SADF on the same day RRL was privatized and transferred to Mijburgh and other colleagues in August 1991. The termination of the contract meant the SANDF had to pay these new owners R32.6 million (\$11 million) in cancellation fees. In 1992, Denel was created as the privatized production facility of ARMSCOR. However, ARMSCOR continued to control acquisitions and to maintain secrecy.

In 1991, Basson began to build Merton House, a multi-million-rand building in Pretoria's plush Arcadia suburb. Basson's plan was allegedly to use the building as a high-class brothel. At the time the project was under construction, Basson claimed he was merely the middleman for a group of American doctors who were developing the property. This new building reportedly outraged local residents. Actual construction started in 1992, and even before the house was completed in 1993, it was up for sale for R8.5million (\$3 million). Waterson Properties built the mansion with directors Christopher Marlow, Tjaart Viljoen, and Sam Bosch. Many important documents were allegedly seized from Bosch's house shortly after Basson was arrested. Sam Bosch agreed to be a state witness in Basson's 1999 criminal trial.¹³⁸

In December 1991, the Project Coast Coordinating Management Committee, including Knobel and Liebenberg, sent Basson to Croatia. There he purchased 500 kgs. of methaqualone from "renegade Croatians" (including high-ranking government officials) and brought it back to South Africa.¹³⁹

The following year, benzilate and quinazolinone compounds, which were most difficult to develop, were acquired in Croatia. During his Croatian transactions, Basson "lost" \$1.6 million. (TRC found that the Croatia deal was in itself extremely questionable, leading to a loss of millions of rand.)

Dr. Basson intercepted Vatican bearer bonds to the value of \$40 million that had been intended for the purchase of weapons by the Croatian government, leading to his arrest in Switzerland. Why the military was importing such large quantities of methaqualone at such high cost at this late stage of

negotiations is not clear and was not adequately answered by Dr. Knobel or Dr. Basson. The TRC questioned whether the methaqualone was actually destroyed.

In the early 1990s, Delta-G made a cash purchase for mercury from another former state-owned company, Thor Chemicals, a SADF front-company that was involved in the network of corporations working to provide materials for the covert CBW program. What this mercury was used for remains unknown. The prosecutor in the Basson trial investigated this purchase since mercury can also be used for the production of sassafras to produce Ecstasy. Others speculate that this purchase was related to the production of Mandrax. However, mercury produced by Thor Chemicals has also been linked to the mysterious nuclear substance, "Red Mercury."¹⁴⁰

In the mid-1990s, the South African Broadcasting show *Agenda* reported allegations of a large 1992 clandestine shipment of a mercuric substance to Delta G during research for a program on murders connected to deals in Red Mercury. The broadcast pointed out that Delta G was reported to have carried out research to create nerve gases that could immobilize enemy forces for a number of hours but not kill them, making it possible to overrun strategic installations without exposing friendly forces to dangerous compounds. Lieutenant-Colonel Charles Landman, who headed a special police team set up to probe a string of murders apparently connected to Red Mercury at the time, confirmed he also had evidence that Delta G had bought more than two tons of yellow mercuric oxide from controversial Natal-based mercury recyclers, Thor Chemicals, in September 1991. *Agenda* producer Jacques Pauw said there was evidence that yellow mercuric oxide was one of the "building blocks" of red mercury, the substance said to make nuclear devices smaller and more effective. Thor Chemicals executive Alan Kidger was murdered two months after the Delta G deal. Kidger was found completely dismembered and smeared with a black oily substance. His death has been linked to the trade in Red Mercury by police investigations. There is some evidence that the murders of Durban armaments dealers Don Juan Lange in June and Dirk Stoffberg in July 1994 and perhaps others were connected to the trade in Red Mercury. To date, none of the "Red Mercury murders" has been solved. The prevailing theory of prosecutors and journalists is that all of these individuals were involved in clandestine arms procurement deals. In 1992, Medchem and Delta G Scientific produced

1,000 kilograms of Ecstasy. The Ecstasy manufactured was, in all likelihood, encapsulated by Medchem Pharmaceuticals. This was a subsidiary of the holding company Medchem Consolidated Investments, under which Delta G Scientific also fell (according to TRC testimony).

During the 1992 time period, a South African Air Force jet, which frequently flew abroad on top-secret missions, was allegedly carrying designer drugs, such as Mandrax. On this occasion, the Mandrax was for the use of a group of rugby enthusiasts who went to the first game between the Springboks and England when sporting ties were re-established. Dr. Johan Koekemoer, former research manager at Delta-G told this information to the Gauteng Attorney General's office researchers, after turning state's evidence in preparations for Basson's trial.

A Chemical Weapons Attack on Mozambique?

On 16 January 1992, a chemical warfare attack was reportedly launched on Mozambican troops. According to the December 20, 1992 report of Lt. General Pierre Steyn, the SADF, as an experimental training exercise, launched an attack from Komatipoort (near the border) into Mozambique. A gas similar to teargas, causing pain and irritation, was allegedly sprayed from reconnaissance airplanes.¹⁴¹

Investigators were unable to determine the accuracy of this information, as the use of the Komatipoort airstrip was not regulated. After the incident, scientific teams from South Africa, Mozambique, Switzerland, Sweden, and the United Kingdom conducted a series of investigations. Military personnel from several countries also attempted to determine the cause of deaths of civilians in Mozambique who were suspected victims of CBW attacks. The reports were inconclusive. The only report that expressed a belief that the troops had been exposed to a chemical agent was that of the British scientist.

These outside investigators had a great deal of difficulty disentangling the proximate cause of deaths since many of the victims were suffering from malnutrition and other diseases at the time of their death. A UN investigation was launched and was also unable to come to any firm conclusions.¹⁴² The reported incident also raised American and British concerns, which helped lead to the *demarche* of 1994.

According to Dr. Joynt, when the Steyn Report was leaked in 1993, it linked him to the reported attack on Mozambique.¹⁴³ Joynt was using unmanned aerial vehicles (UAVs) to locate mines for clearing in the Komatipoort area. One of his planes was accused of dropping chemical agents on Mozambican soldiers in January 1992. After the alleged incident, approximately 40 soldiers were found to be acting strangely.

Dr. Ian Phillips, ANC Defense Expert, asserts that battlefield use of CBW was evident with the Mozambique incident.¹⁴⁴ He alleges that a high-flying airplane launched a chemical attack against Mozambican soldiers on the border near Nkomati. The bomb exploded well above the ground. The use of CBW against Mozambican troops preceded the whites only referendum in 1992 and was used to demonstrate the resolve of the de Klerk government. Afterwards, three teams of inspectors, including one from the UK Ministry of Defense, were sent to examine the site.

Dr. Torie Pretorius believes that the SADF was carrying out an experiment on a chemical agent in Mozambique.¹⁴⁵ The drone aircraft with yellow smoke was tested after De Klerk's speech against secret projects in 1990.

In an interview, Gen. (ret.) Meiring stated that, in January 1992, he and the Mozambican General Dias went to the hospital to inspect troops that had reportedly been subjected to a gas attack by SADF.¹⁴⁶ The SADF 6th Medical Battalion found no evidence of a gas attack. The SADF concluded that the troops who were reportedly attacked had deserted in the face of a Mozambique National Resistance Movement (RENAMO) attack.¹⁴⁷

The Steyn Report

The Steyn Report was the most ambitious attempt to uncover the secret projects of the SADF, including Project Coast, with the aim of helping to restore civilian control over the military. The year 1992 was a very sensitive period, and rapprochement between the regime and the ANC was proceeding slowly. The behavior of the security forces was a big problem given the weak civilian control. All attempts at reform met with resistance. In 1990, Lt. Gen. Steyn was SADF Chief of Personnel and was working with Jakkie Cilliers (now director of the Institute of Security Studies, Pretoria) on civilian control of military. Together, they produced a code of conduct for SADF that

was then rejected by SADF leaders. Later, Lt. Gen. Steyn proposed completely opening the SADF to blacks, but the proposal was also rejected.

The problem in the SADF was that traditional leaders (Malan, Liebenberg, and others) had acquired an exalted status and were being driven by political convictions. Their underlings were following them blindly. In such a situation, imposing a neutral and binding code of conduct was difficult to accomplish.

In mid-1992, Lt. Gen. Steyn was transferred and promoted to Chief of SADF staff, where he chaired staff functions and not line functions. However, he was in the position to control SADF programs. He worked with Roelf Meyer, the Acting Defense Secretary, 1991-92. In the second half of 1992, the Goldstone Commission began to investigate violence in South Africa. SADF generals became increasingly concerned that their actions would be discovered and that they would lose control.

During the investigations, Justice Goldstone stumbled upon damning evidence and reported directly to the President and not to the Cabinet or to the SADF. De Klerk was compelled to investigate and called Steyn to report to the Cabinet. The SADF Army Chief, General Meiring, and SAP General van der Merwe asked Steyn to investigate, and he agreed. On 18 November 1992, de Klerk appointed Lt. Gen. Steyn to investigate SADF secret projects, including Basson and Project Coast and "third force" activities around the country. As a result, de Klerk learned of the activities of Basson, Project Coast, CCB and other covert units.¹⁴⁸

SADF military procedures could not be used in the investigations, because the subjects of investigation were not all military personnel and because military procedures presupposed full cooperation from all involved. Because of the possibility of a military cover-up, counterintelligence agencies were used to check on the validity of information. The information was reviewed independently by two separate organizations to confirm allegations. The two agencies were the National Intelligence Service (NIS) (later the National Intelligence Agency), headed by Dr. Barnard and Dr. Scholz and SADF Counterintelligence, led by Joffel van der Westhuizen.¹⁴⁹

The CIA and MI6 were concerned and were in touch with the NIS/NIA. While the different organizations often had to rely upon information obtained from the same source, it was probable that the information that they

received was valid. The NIS/NIA had been conducting its own intelligence operation since 1989, investigating the SADF and SAP secret projects. Targets for investigation included Project Coast and Basson, as well as Jan Lourens and Brian John Davie of Protechnik, who were involved in the CBW experiments.

According to a *Weekly Mail & Guardian* account of the Steyn Report the three front companies (Delta G, Roodeplaat Research Laboratories and Protechnik) were found to be involved in developing chemical and biological weapons.¹⁵⁰ In 1991, SADF Counterintelligence began investigating Basson after there were security leaks to the media. Evidence was found that Basson's team had armed RENAMO with chemical weapons.

The Steyn team quickly investigated projects that needed to be stopped. However, financial misdealings were not examined. Investigations went smoothly, until the first report was completed and issued on 20 December 1992 and landed on de Klerk's desk at the beginning of January 1993. De Klerk was asked to take action, even though there was no legal basis for action, no charges and no solid evidence. However, pre-emptive steps were deemed necessary, before a cover-up could be launched. De Klerk was presented with the counterintelligence evidence, which demonstrated that SADF secret programs ran against de Klerk's stated policy of civilian control over the military. However, de Klerk failed to ask SADF Chief of Staff, Liebenberg, and SAP head, van der Merwe, if they knew about the illegal activities. Instead, de Klerk called in Liebenberg, Meiring, and the SADF Chief of Intelligence and informed them of the evidence. Liebenberg said he was "shocked," and that he would report back in 10 days.

President de Klerk decided that firm and decisive action was needed, even though there was no conclusive evidence. In mid-January 1993, de Klerk called Liebenberg in again and announced that he had changed his mind and that he wanted to act assertively. He would fire the generals responsible for the CCB and other secret projects. De Klerk asked Liebenberg to ensure that the SADF policed itself. Subsequently, de Klerk launched another, more random investigation. Instead of acting against Liebenberg and van der Merwe, de Klerk let Liebenberg off the hook, and Liebenberg was not obliged to report back. De Klerk did not even confront the SAP's van der Merwe about the activities of the CCB unit of the SAP and its notorious leader, Eugene de Kock. As a result of the second investigation,

27 generals retired early. Col. Dr. Basson was required to leave the SADF at the end of March 1993 and was given a “soft retirement” and reserve status.¹⁵¹

By the first quarter of 1993, the sources of investigation were drying up. Steyn was ostracized, and there was no prosecution of SADF generals. In fact, some generals, such as Chris Thirion, sued the government and won. The Steyn Report found that Project Coast and Basson, RRL, Delta-G, Medchem, and SADF were all operating completely outside the purview of the civilian government, and the TRC confirmed these findings. According to David Steward, de Klerk's chief of staff, P.W. Botha was the only civilian who knew anything.¹⁵² Subsequently, the National Prosecutor's office (Anton Ackermann and Dr. Torie Pretorius) took up the investigation, as evidence was laboriously dug up and as cases were developed against de Kock and Basson. After the Steyn and Goldstone Commissions' investigations and findings, the SADF “put the shutters down.”¹⁵³

According to General (ret.) Meiring, who was Army Chief of Staff, the “night of the generals” was based on hearsay evidence and the media.¹⁵⁴ There was bad blood between the SADF and the NIS/NIA. Steyn was Acting Chief of SADF. He relied on unconfirmed evidence given to him by military intelligence and the NIS/NIA. Often, Steyn and de Klerk obtained information from only one source.

The Steyn Report and the Rollback of Project Coast

The Steyn Report found that Project Coast was offensive in nature. The SADF had to create an offensive CBW program in order to test defensive measures, and the lack of civilian control meant that the program was used as only a few top SADF leaders saw fit. According to this report, starting in 1985, the ANC and MK escalated their campaign of violence to include civilian targets, and the SADF and SAP retaliated by using methods, such as CBW. These persisted, despite later efforts made to assert civilian control.

Gen. Liebenberg and Gen. Meiring, in particular, knew about SADF secret programs, including Project Coast, and took an assertive hand in running them. Gen. (ret.) Liebenberg signed for Project Coast activities and so did Surgeon General Knobel.

De Klerk became aware of the scale, sophistication, and offensive uses of Project Coast at the start of 1993. Upon receiving Steyn's report, de Klerk

finally ordered the destruction of all lethal and incapacitating CBW agents, as well as an end to such research and operations. He also forced the retirement of Basson at the end of March 1993. In January 1993, the Minister of Defense, Kobie Coetzee, acting on de Klerk's order, authorized all CBW research and development stopped. Project Coast documents containing formulas and experiments were to be transferred to CD-ROMs.

According to Dr. Kobus (Jack) Bothma, in testimony at the Basson trial, an office secretary scanned in the documents from Project Coast onto CD-ROMs. Philip Mijburgh transferred the CD-ROMs to the Ministry of Defense, where they were placed in the vaults, and President de Klerk was given a key to the contents, so that only the State President could open it, along with the Surgeon General, and Head of the NIA, Niel Barnard.

Although it seemed that Project Coast had been rolled back, Mijburgh issued destruction documents that were inconclusive. While the South African government believed that it had rolled back Project Coast, four years later, in January 1997, police investigators found that Basson had taken copies of Project Coast documents home and hidden them in trunks.

Whether all CBW agents were destroyed at the beginning or end of 1993 remains a matter of opinion. Also, large quantities of drugs were unaccounted for and were either in possession of Basson or were secreted elsewhere. According to General (ret.) Meiring, all CBW agents were dumped out to sea at the end of 1993. The Forensic Branch of the SAP, headed by SAP General Lothar Neethling, placed all agents destroyed on a schedule. The agents were dumped 200 nautical miles south of Cape Argulhas. While lethal CBW agents were destroyed, the irritants, including NGT (CR) gas were kept.¹⁵⁵

According to Dr. Knobel's testimony to the TRC, SADF Counterintelligence destroyed all CBW agents in January 1993. The methaqualone purchased in Croatia was allegedly destroyed then, after the order was received that work on all incapacitants should cease.

On 7 January 1993, Dr. Knobel advised his superiors that South Africa "should conceal" NGT (CR) gas from the inspectors of the Chemical Weapons Convention (CWC). On 14 January 1993, South Africa formally acceded to the CWC. However, work on the dispersion of NGT (CR) gas continued.¹⁵⁶ By March 1993, de Klerk publicly announced that South Africa

had dismantled its six nuclear weapons in 1991. By the end of 1993, the South African missile program was rolled back.

The order to terminate Project Coast led to the immediate transfer of ownership of RRL and Delta G to Project Coast managers, including Basson and Mijburgh. The way had been opened to massive financial improprieties. The 10 shareholders in the Roodeplaat Research Laboratories became millionaires overnight when the SADF closed down Project Coast at the beginning of 1993. Later, the SADF paid the debtors, who were the shareholders, a total of R18 million (\$6 million). However, the details of this multi-million-rand scam only emerged in 1996 in Parliament. This was almost a year after the South African National Defense Force (SANDF), which had replaced the old SADF, had written off Project Coast's debts of almost R22 million (\$7.5 million in 1996 U.S. dollars).¹⁵⁷

According to Gen. (ret.) Meiring, the process of rolling back the CBW Program took almost three years of commercializing the front companies and phasing out the scientists.¹⁵⁸ In 1993, a forensic audit was conducted to determine the whereabouts of all moneys and the availability of CW and BW agents. The only problem detected by this audit was the Croatian swindle, and a South African agent arrested by the Swiss government. Also in 1993, a parallel investigation took place. The Office of Serious Economic Offenses (OSEO) was investigating reports of financial misdealings, and General Meiring and Surgeon General Knobel appeared and gave testimony. They also briefed President de Klerk.

In early 1993, the ANC and MK became aware of the Steyn Report and the CBW program.¹⁵⁹ Another indication of the CBW program for the ANC was the "Red Mercury" campaign, which involved a number of high-level assassinations, including killings in Cape Town and the use of chemical compounds.¹⁶⁰

On 31 March 1993, Basson was retired by President de Klerk from the SADF Medical Service (SAMS) and became a reservist. Basson had also been ordered to destroy Project Coast documentation. However, Basson did not follow, to the letter, the orders of his superiors and kept Project Coast research documentation alive. Transnet, the state-owned transportation and infrastructure corporation that built and maintained railroads, tunnels, airports, and hospitals, immediately employed him. Basson then went to

Libya on contract to give advice on military counter-measures to CBW attacks.

Gen. (ret.) Meiring states that he does not know if Basson gave away secrets. According to Meiring, the U.S., especially, as well as the UK and other NATO countries, knew about Project Coast and were worried that information would fall into the wrong hands. However, U.S. and UK officials apparently never knew exactly what South Africa possessed at this time.

V. Transition to ANC Rule, Proliferation Concerns and Efforts to Conceal Project Coast Details: 1994-1996

In the second half of 1993, peace negotiations between the de Klerk government and Nelson Mandela and the ANC gained momentum. In August 1993, the Office of Serious Economic Offenses (OSEO) informed MI-6 and the CIA of the misdeeds of Basson and Project Coast.

The Americans and British became even more concerned when, in October 1993, Basson made his first trip to Libya on behalf of Transnet, the state-owned transportation and infrastructure corporation. This was the first of Basson's five visits to Libya, with his last visit in October 1995, and it is possible that he sold Project Coast secrets.

In addition, South Africa submitted a Confidence Building Measure (CBM) for 1993, as stipulated by the BWC, which provided details on the rollback of the biological side of Project Coast. In November 1993, the Americans and British objected to the South African CBM and began the process of interacting with the South African officials in an effort to see that Project Coast would be rolled back to their satisfaction. According to U.S. Ambassador Princeton Lyman, the South African CBM was not forthcoming on many aspects of the CBW program, including offensive uses, weaponization, and proliferation.¹⁶¹

According to Peter Goosen, proliferation expert in the Ministry of Foreign Affairs, the South Africans lacked the technical expertise to submit an acceptable CBM and sought British and American assistance. In the meantime, de Klerk and his colleagues attempted to reassure the U.S. and the UK that the CBW program had been rolled back.¹⁶²

In January 1994, negotiations between the de Klerk government and Nelson Mandela and the ANC finally reached settlement, and elections were scheduled for April 27. As the momentous hand-over of power approached, the U.S. and UK became increasingly concerned about Basson and others proliferating chemical and biological warfare secrets to other states and/or groups of concern.

On 11 April 1994, Ambassador Lyman and the British High Commissioner, Anthony Reeve, delivered a *demarche* to President de Klerk.¹⁶³ The U.S. and Britain demanded that their experts be briefed, all

CBW systems and records, including the CD-ROMs be destroyed, abuses of the program be investigated and reported, and Mandela be informed. According to David Steward, de Klerk's chief of staff, the American and British ambassadors regarded Basson as a "dangerous agent."¹⁶⁴

Within the American team, there were differences. Ambassador Lyman was primarily concerned with reducing the proliferation threat, and State Department and CIA officials joined him in this approach. However, officials from the National Security Council (NSC) were outraged by evidence of the use of CBW and wanted to see that those responsible were punished. Department of Defense officials were late in joining the U.S. team and felt marginalized. Consequently, they sided with the NSC. Ultimately, Ambassador Lyman was able to prevail and focus on proliferation concerns, even though seeking convictions for past CBW use was part of the *demarche*.¹⁶⁵

According to Dr. Knobel, then South African Surgeon General, President de Klerk and the South Africans cooperated with the Americans and British.¹⁶⁶ However, Knobel and other South African officials believed that the Americans and British were acting on the basis of questionable and uncorroborated evidence, some of which came from press reports. On 21 April 1994, South Africa responded to the *demarche* and asserted that Project Coast records were a "national asset" and that the CD-ROMs would not be destroyed. According to Knobel, he and Basson were given responsibility for briefing the U.S. and British experts and Mandela.

After the *demarche* and the inauguration of President Mandela in May 1994, American and British delegations arrived for the first of several visits to South Africa. Knobel, Basson and others extensively briefed the delegations over a three-day period and took them on a tour of Roodeplaat Research Laboratories, which had been converted to commercial production. The SADF compiled a large file on Project Coast and gave it to the Americans and British.

South Africa reassured the British and Americans that the three keys to gain access to Project Coast secrets on CD-ROM were in the hands of the President, Surgeon General, and National Intelligence Agency head. The South Africans transferred information, which they had obtained from the Russian and Iraqi programs (including flesh-eating bacteria). Knobel claimed that Basson was offered a job and money by the U.S. and Britain but

declined. Three teams (from the UN, U.S. and UK) investigated the January 1992 alleged CBW incident in Mozambique. In 1994 and 1995, American and British teams made more visits to South Africa to facilitate the rollback of the South African CBW program.

Basson and his trips to Libya were the main source of contention between the US, Britain and South Africa. In spite of the *demarche*, Basson continued to visit Libya in 1994 and 1995, until he had completed five trips. The U.S. and UK kept up the pressure on South Africa to control Basson and suggested that the SANDF, which had replaced the SADF, rehire him. Opinion on the damage done by Basson varies.

According to Mangold and Adams, there is no doubt that Basson was originally invited to Libya to help them with chemical warfare facilities at Rabta.¹⁶⁷ General (ret.) Meiring believed that Basson did not pass secret information on the CBW program to the Libyans or to other foreign governments. However, Meiring suggested that he gave them other information and defensive CBW techniques. There was still secrecy about how the knowledge was passed. Meiring stressed that Basson was always under instructions, and claimed there was nothing that went unnoticed by the SADF.

According to Gen. (ret.) Meiring, much of the information for Project Coast was obtained from the nationals of the U.S., UK, and Germany. Highly technical advanced knowledge passed from U.S., UK, and German scientists to the South Africans. The South African government did not want to cause the American and British governments embarrassment by revealing that fact. Ambassador Donald Mahley, U.S. State Department proliferation expert, and his British counterpart had led teams that examined Project Coast documents in 1994.

The range of pathogens that were developed led to the American claim that South Africa had the “second most sophisticated program next to the Soviets.” While there was no evidence that South African scientists themselves had genetically modified pathogens to create new ones, there was evidence that Project Coast had obtained the pathogens from elsewhere. In addition, from 1989-93, the South African military still had the capability to launch or deliver a nuclear or CBW payload.

On 18 August 1994, Knobel briefed President Mandela, Defense Minister Modise and his deputy, Ronnie Kasrils. The SANDF also provided

a large file on Project Coast. Before April 1994 and the elections, Mandela was only getting sketchy details from de Klerk about what was developed, according to senior ANC officials.

Within the ANC, there was a debate, from 1990-94, about whether to keep the nuclear program. However, the conclusion to roll back the CBW program was unanimous. According to Dr. Ian Phillips, ANC defense expert, the ANC wanted to know where the information about the CBW program had disappeared. The ANC believes that white South African scientists and former operatives who are now living in the Middle East as well as the U.S. and Britain sold many of Project Coast's secrets to foreign sources.

Despite these internal differences and uncertainties, the policies of the new South African government included a strong commitment to promoting non-proliferation norms and treaties. Prior to signing the Treaty on the Non-proliferation of Nuclear Weapons (NPT), the Minister of Foreign Affairs, Roelof "Pik" Botha, sought and got repeated assurances from Surgeon General Knobel and the Department of Defense that South Africa no longer had a CBW program. Botha repeatedly asked for clarification on this point, as he had to give assurances that South Africa had destroyed its CBW program before signing the NPT.¹⁶⁸

Lt. Gen. Steyn briefed Mandela, after his inauguration, on the findings of the Steyn Report. Mandela agreed not to release the Steyn Report due to concerns it might jeopardize the transition process. All parties, including Mandela's office, F.W. de Klerk (who had stayed on as Deputy President in the interim government), and two attorney generals, who had access to the information in the report, kept the report under wraps for more than two years.

In 1997, *The Weekly Mail and Guardian* reported that President Mandela had been in possession of the Steyn Report since 1994. However, presidential liaison Parks Mankahlana denied that Mandela had a copy but confirmed that Steyn had briefed the president. The difficulties that de Klerk had in ensuring that his order to dismantle the CBW program was carried out and a widespread tendency to stonewall the politicians made a deep impression on the military leadership appointed by Mandela.

These experiences figured prominently in the mind of the new Secretary of Defense, Pierre Steyn, and others who were the first leaders of the new Office of Secretary of Defense (OSD). They believed that a combined

headquarters, led by civilians, was critical for developing a professional and fully integrated new South African National Defense Force (SANDF). An important mission of the newly created OSD from the start was to put in place oversight and accounting procedures that would make it impossible for SANDF personnel to engage in the type of fraud and out-of-control abuses associated with Project Coast.¹⁶⁹

In 1995, according to Dr. Ian Phillips, ANC defense expert, the establishment of a Defense Department with the assistance of the U.S. and UK cleared up the problem of military dominance and the “security state.”

The 1994 Defense Act created better structural differentiation and civilian control. The Mandela government had to find a way to implement the Defense Act in a piecemeal fashion, after it had been found to be unconstitutional, due to certain clauses.

In November 1994, the Office for Serious Economic Offenses (OSEO), a special unit attached to the Attorney General's department, completed an official report on the activities and financial irregularities of a network of companies that supplied the SADF with pharmaceuticals and anti-chemical warfare equipment (i.e., Project Coast). The report was sent to Justice Minister Dullah Omar, was marked “top secret,” and the minister was reported to be studying it.¹⁷⁰ One researcher in the Attorney General's office reported studying Project Coast in early 1993.

Jan Swanepoel, the head of the OSEO, confirmed to *The Weekly Mail and Guardian* that the company network was under investigation in connection with “flow of funds connected with an army project.”

Another report in *The Sunday Tribune* in December 1994 described the network of companies working with SADF on CBW. They named the key directors of this network under investigation as Dr. Wouter Basson, Dr. Wynand Swanepoel, and Dr. Phillip Mijburgh (a nephew of Magnus Malan), and noted that all three had served in SADF's medical service (SAMS).

The Weekly Mail and Guardian reported, from correspondence between Basson and Mijburgh, that they were researching the legal aspects of CBW.

The same newspaper also reported that SADF military officials used the Council for Scientific and Industrial Research (CSIR) facilities to obtain and develop different strains of germs, some of which were highly toxic to humans.¹⁷¹

One week before, in an article in *The Weekly Mail and Guardian*, it was reported that ARMSCOR acknowledged at the end of 1994 that it owned Protechnik, a chemical warfare research plant. Protechnik described itself as the biggest nuclear, biological, and chemical laboratory in Africa. It was officially designed to develop only defensive equipment against chemical weapons. However, its operations stirred protests (and continue to do so) in the Pretoria metropolitan area, especially due to fears of accidents.

By the end of 1994, more information about the CBW program was emerging from several other sources. They included an investigation by a team from the Attorney General's office and reports in *The Sunday Tribune*, and *The Weekly Mail and Guardian*, based on their independent investigations. Reports emerged of experiments at SADF research firms, including some bizarre experiments involving dogs.¹⁷²

In 1995, Basson's trips to Libya continued. In February 1995, an article appeared in *The Times* of London on possible South African CBW links to Libya. Evidently, someone in MI-6 tipped off the *Times*. In March 1995, the CIA and DIA informed President Clinton of Basson's activities, who authorized the sending of a delegation to South Africa, which met with Mandela. It is not certain if the delegation met with Basson or if was he in Libya.

Once again, the Americans urged the Mandela government to bring Basson under control by rehiring him. On 15 April 1995, South Africa submitted a much-revised Confidence Building Measure (CBM). This was nearly two years after the U.S. and UK challenged the 1993 CBM (no CBM was submitted to the UN in 1994). This time U.S. and UK objections were addressed satisfactorily. Even so, the Americans and British continued to share concerns about the potential spread of the secrets on the CD-ROMs by Basson and others to states and/or groups of concern.

In May 1995, Defense Minister Modise and Secretary of Defense Pierre Steyn rehired Basson as a regular SANDF surgeon (he had been on reserve status). In early 1995, Generals Meiring and Knobel sat down and discussed Basson, after receiving information from NIA, CIA, and MI-6. Basson had been asked by government and SANDF officials to curb his behavior, but there was no way to do so, except to rehire him. Meiring and Knobel went to Deputy Minister of Defense Ronnie Kasrils and urged that Basson be rehired.¹⁷³ Kasrils went to Modise and Steyn and recommended the same.

Later, Kasrils defended the government's action in rehiring Basson, by saying it was to stop him from giving valuable and potentially dangerous secrets about the chemical and biological warfare programs to other countries.¹⁷⁴ Dr. Ian Phillips, ANC defense expert, said that Basson was rehired in order to bring him under parliamentary scrutiny at a time when no legislation was in place that could stop his activities.¹⁷⁵

Evidently, great concern existed within the South African government, the SANDF, and among foreign governments about the possibility that Basson was selling Project Coast secrets. However, even after being rehired by the SANDF, Basson still made another and final trip to Libya in October 1995.¹⁷⁶

A U.S. government lawsuit in Philadelphia, Pennsylvania against ARMSCOR created tense relations between the U.S. and South African governments. This hampered U.S. investigators in exploring possible ARMSCOR involvement in chemical and biological weaponization. However, overall U.S. relations with the Mandela government remained reasonably sound, and the investigations into Project Coast concluded satisfactorily. Finally, in October 1996 Deputy President Mbeki and Vice President Gore worked out an agreement so that ARMSCOR could plea bargain at a meeting of the U.S.-South African Bi-national Commission. The Defense Committee and Defense Minister Modise signed the agreement in July 1997.

In February 1996, the Mandela cabinet finally acted on the OSEO report, after 16 months of keeping it secret. This ruling gave OSEO investigators permission to follow the flow of funds overseas but did not agree to the request made by the Justice Ministry that the secrecy on the project, regulated by the Protection of Information Act, be lifted. However, no one was charged immediately, and Project Coast's debts of R22 million had already been written off by the SANDF.

In May 1996, the Parliamentary Standing Committee on Public Accounts began its own investigations. However, this committee and a special parliamentary committee on Project Coast encountered resistance from SANDF chief, General Georg Meiring, who refused to release information about the CBW program.¹⁷⁷ Even though parliamentary committee sessions were held in camera, members were unable to learn many details about Project Coast. In August 1996, the special committee finally questioned

Basson's involvement with the privatization of RRL. Since this was almost a year after Project Coast's debts had been written off, it indicated how weak parliamentary oversight was in practice.

The difficulties encountered by parliamentary committees to hear details of the military involvement in Project Coast reflects a transitional agreement reached by cabinet members of the Government of National Unity (GNU).

The agreement, endorsed by President Mandela and his deputy presidents, Thabo Mbeki and F.W. de Klerk, supported General Meiring's position that details of Project Coast should remain secret and that an earlier cabinet decision to lift the secrecy from the project did not apply. This decision in part reflected a concern that full disclosure might compromise ongoing criminal investigations.

Mandela's spokesman, Parks Mankahlana explained in confirming Mandela's support for Meiring's position that, "an overall lifting can be considered once the OSEO investigation is over ... There is no intention to impose permanent secrecy on the matter."¹⁷⁸ The decision to withhold was taken due to concerns of the GNU, the new SANDF leadership, and former SADF generals, as well as the U.S., Great Britain, and other countries, that full public disclosure, either in parliament or in the TRC hearings, could pose a serious threat to domestic security.

Foreign governments were also concerned that highly sensitive information might be leaked. Concerns about the fragile political situation that prevailed in South Africa and the possible reactions by the public or paramilitary groups to complete disclosure of Project Coast was a genuine source of concern for many South African politicians in the government and several interested foreign governments, including those of the U.S., UK, Israel, and Germany, during this period.¹⁷⁹ They were concerned that past relations between their scientists and weapons experts and those with South Africa during the 1980s would be revealed.

VI. Basson's Arrest and Trial and TRC Hearings, 1997-2000

Revelations and Roadblocks during the Truth & Reconciliation hearing on Project Coast after Basson's arrest in 1997

The South African Truth and Reconciliation Commission (TRC) was established at the end of 1995 when Nelson Mandela officially appointed the Chairperson, Archbishop Desmond Tutu and Dr. Alex Boraine, Vice-Chairperson, and 17 TRC Commissioners. The mandate of the Truth and Reconciliation Commission required full disclosure and transparency about the past actions of current and former government officials. In December 1996, Mandela's office, for the first time, provided the TRC with a copy of the Steyn Report, so it could be investigated more fully. At the time, the TRC officials said that the information could not be released, because much of it was in the form of "untested allegations."¹⁸⁰

The TRC was "a political compromise born out of the negotiated settlement between a minority government and the liberation movements. It was "a compromise between those who wanted an *apartheid* war crimes trial and those who demanded blanket amnesty for those who had killed, tortured and committed political crimes during the *apartheid* era."¹⁸¹ The Commission tackled four tasks: 1) to reveal the truth about the period between 1960 and 1994 in order to understand how the *apartheid* system developed and endured; 2) to provide a forum for thousands of victims; 3) to consider what compensation victims deserved; and 4) to consider amnesty applications. After an investigative stage and a series of hearings, the TRC issued a final report in 1998.¹⁸²

From the outset there were limits imposed on the scope of the TRC's investigations by its legal mandate, subsequent rulings of the executive branch, and political considerations, as well as ties to the fragile status quo that prevailed in the first years after the transition and time constraints.

The TRC process has been criticized from several different quarters. Some have charged that the process was hopelessly naive from the beginning. Others have cited the lack of personnel with experience working in the military or intelligence community as a fatal flaw that limited the

Commission's ability to uncover the truth about past atrocities.¹⁸³

However, the temper of the times and its legal mandate called for the body to primarily focus on uncovering past atrocities and promoting reconciliation. This mandate shaped the questions, procedures, and personnel who worked as investigators and lawyers for the Commission. Moreover, TRC lawyers were required by law to protect the civil liberties of South African citizens who were accused of past wrongdoing, while ensuring that no one was above the law. These requirements meant that the TRC process was extremely slow and time-consuming.

From the start the TRC investigation into Project Coast was limited by Ministry of Defense restrictions, designed to ensure that the investigation did not become a "fishing expedition." TRC investigators worked closely with military intelligence and representatives of other agencies, as TRC investigators were sensitive to the needs of several ongoing criminal investigations and national security concerns. "National security" proved to be the major constraint on the scope of the hearings. Time was also a limiting factor, as Basson's lawyers engaged in a series of stall tactics that delayed his appearance until the closing days of the TRC hearings. Thus, a number of questions about this project remained unanswered at the time the TRC investigation phase ended.

Initially, TRC investigators had little information about Project Coast. A top-secret briefing to a few Commission members in 1996 revealed only that South Africa had a CBW capacity in the past, but only a "defensive" one, and that it was dismantled prior to the 1994 elections. The TRC continued with low-level investigations, but had so little information at their disposal that it seemed unlikely that anything new would emerge.¹⁸⁴

This expectation changed suddenly in January 1997 when Basson was arrested during a sting operation on charges of fraud and the possession of illegal substances based on his alleged effort to sell 1,000 Ecstasy tablets.¹⁸⁵

A subsequent search of Basson's friend and business associate, Sam Bosch's home, uncovered 5 or 6 trunks and a couple of suitcases that contained secret documents related to Project Coast that were thought to have been destroyed when the CBW program was dismantled.

The senior TRC researcher, Dr. Villa-Vicencio, rushed to Pretoria, after Basson was arrested, in order to represent the TRC. He was joined by Mike Kennedy, the representative of the National Intelligence Agency (NIA), and

representatives from the Office of Serious Economic Offenses (OSEO), and the Gauteng Attorney General's Special Investigation Team. Together they went through the contents of these trunks. After some initial squabbling, an agreement was reached that the NIA would take control and responsibility for keeping these documents secure. Before the documents were turned over to the NIA, the contents of the trunks were inventoried.¹⁸⁶ These documents contained the core of information, which formed the basis of the TRC's investigative work over the next 18 months. The TRC called in Professor Peter Folb, University of Cape Town, to serve as their scientific and technical adviser.

In March 1998, Chandre Gould, another TRC investigator who had access to the documents, and the TRC's Commissioner, Wendy Orr, looked at some of the technical documents that had been found in Basson's trunks. Gould wanted an explanation of some of the pharmaceutical and medical terminology. Orr was horrified by what she did understand, even though there was much that she did not understand in the contents. One of the first documents Dr. Orr examined was the infamous *verkope lys* (shopping or sales list) (See Appendix C).¹⁸⁷

The senior TRC investigator, Villa-Vicencio, concluded that the trunks contained a "mixed bag" that included memorabilia, as well as sensitive technical information, which might prove embarrassing to foreign governments, as well as information readily available in open source literature (e.g., formulas for methaqualone and how to build a bomb). He felt that collectively, these documents confirmed the idea that South Africa's biological weapons program had developed some very sophisticated processes and procedures.¹⁸⁸

The beginning months of 1997 were the start of a period of unprecedented public disclosures by South African newspapers. A wide range of the government's most sensitive information about past activities continued to leak and be reported by the press throughout the TRC deliberations. Thus, despite the fact that many Project Coast hearings were held behind closed doors, the public heard much of this testimony in an almost daily stream of revelations. Many of these articles revealed details about the scope of Project Coast activities and efforts by past officials to use CBW against political enemies.

During this period, TRC investigators were discovering "pockets of secret documents" that were supposed to be destroyed by former SAP, SADF intelligence and prison authorities, but had not been shredded. As TRC investigators conducted spot checks of police stations in six different areas,

they found a wealth of information contained in residual documents that were never destroyed.¹⁸⁹

The Project Coast hearings were scheduled to take place from 8 to 12 June 1998. However, several weeks before these hearings started the Gauteng Attorney General expressed concerns that the appearance of key witnesses at these hearings might jeopardize their impending criminal prosecutions. Defense, NIA and representatives of President Mandela's Office all supported the position that much of information must remain classified, including information about South African collaboration with foreign countries, as it would pose a proliferation threat. Several members of the SANDF lobbied to not hold the hearings at all.

At a hastily called meeting of representatives of various agencies at the end of May 1998, two main objections were raised. One objection to the TRC hearings was that information disclosed during these hearings could lead to the proliferation of weapons of mass destruction that would cause South Africa to violate its international obligations. A second concern was that revelations of the involvement of various foreign governments in the CBW program could jeopardize international relations. South African government officials told the participants that Britain and the U.S. had voiced the strongest objections to the hearings.¹⁹⁰ Dr. Peter Folb, the TRC's scientific adviser, disagreed with the official assessment during this meeting, "because much of the science involved in Project Coast was pedestrian."¹⁹¹

The compromise that was reached was to have a small group of representatives from the meeting go through every document in the TRC's possession and decide together which could be placed in the public domain at the hearing. Commissioner Orr, Dr. Folb, and TRC investigators Gould and Jerome Chaskalson represented the TRC. Knobel, his lawyers, NIA officials, and other SANDF members, represented the government. Documents were placed into one of three categories: (1) no restrictions (i.e., ones to be referred to in the hearing and released to the media); (2) ones to be referred to but not released; and, (3) those that would not be mentioned at all.

The President's office did not accept the TRC's decision to hold the public hearings and issued an application to have section 33 (c) invoked, which would require that the hearing be held behind closed doors. Thabo Mbeki's legal adviser and Abdul Minty, Chairperson of the Council for the Non-Proliferation of Weapons of Mass Destruction, formally

presented the request for a closed hearing.¹⁹² After extensive discussions, the TRC went ahead with open hearings with the understanding that a government representative would monitor the proceedings to ensure that no proliferation or diplomatically embarrassing information was released. This agreement meant that the hearings were bogged down with legal motions and delays from the first day.

On the first day of the hearing Dr. Knobel, accompanied by his lawyer, passed out several documents marked “top secret” to the media. These documents were subsequently recalled on the ground that they had not yet been cleared through the proper declassification channels. Months later, an unlucky Swiss journalist was detained at the South African airport and thrown in jail overnight when he was found leaving the country with classified documents from the first days of the TRC hearings. Dr. Folb, TRC senior expert technical adviser, was no longer allowed access to these materials, including his own memos, written for the TRC.¹⁹³

Legal wrangling delayed Basson's appearance before the TRC until the last day of the hearings. However, scientists in charge of Project Coast projects did appear. Basson only testified after he was declared in contempt of a TRC citation and his lawyers had exhausted a lengthy appeals process. His Supreme Court application that he not be forced to testify before the TRC, due to his constitutional right not to incriminate himself, was turned down on 27 July 1998. The TRC's final closing date for non-amnesty hearings was 31 July, and legal wrangling meant that Basson did not take the stand until the last day. He did not reveal any new information and sidestepped most questions. The hearings ended with many questions unanswered.

Although Basson used legal delaying tactics, the threat of criminal penalties did finally force him to testify before the Truth and Reconciliation Commission (TRC). Even though his TRC testimony was of little value, several individuals who had worked for Basson started to reveal many more details about the covert programs in their testimony in an effort to obtain TRC amnesty and immunity in future legal proceedings.

The scientists began to talk to authorities about what CBW weapons and knowledge were developed, how the knowledge and weapons were used, and even some details about what was sold after the 1994 elections.¹⁹⁴ Other individuals, such as Dr. Johan Koekemoer, former research manager of Delta-

G, was arrested for being in possession of the designer drug Ecstasy and agreed to testify against Basson. The public also heard about the extensive misappropriation of public funds.

Disclosures from the TRC had international ramifications. In response to testimony at the TRC hearings in June 1998, the British Military Intelligence (MI5) and police reopened files on six people who had died in Britain during the 1980s and 1990s of apparent strokes or heart attacks. The re-opened investigations were initiated to explore which of these deaths might have been murders related to South Africa's secret germ warfare program. These investigations required unprecedented amounts of cooperation between South African and British intelligence services. The dead individuals had all worked in Britain against the *apartheid* regime, or had knowledge of Pretoria's secret operation in the 1980s to acquire and develop chemical and biological weapons, at the time of their death in Great Britain.¹⁹⁵

Despite the limited knowledge obtained from Basson at the TRC, these hearings played a critical role in opening up secret government activities. The TRC hearings on Project Coast opened "a window on the house of horrors" to public scrutiny and let public know much more about what went on during *apartheid* era. These disclosures, in turn, helped to stimulate a national dialogue that was designed to allow the nation to start to heal.¹⁹⁶ These disclosures also established an important precedent and ensured that South Africa's most important post-1994 trial involving national security issues would be open rather than closed to the public.

Wouter Basson's Bail Hearing: The Role of Non-Governmental Organizations (NGOs) and the Press in Ensuring Public Disclosure

In August 1998, Basson was charged on 17 counts including murder, conspiracy to commit murder, fraud, and the possession of and dealing in, illegal substances. Why Basson had stolen the Project Coast documents and kept them in his garage, just waiting to be discovered, is not clear. Dr. Daan Goosen, former managing director at RLL (until he complained that the program was out of control and was forced to resign), claimed that Basson kept the documents in order to have something of value (he was unable to replicate the knowledge on his own) and because he was possibly

blackmailing people for protection.¹⁹⁷ Others expressed concern that he kept the documentation in order to be able to sell it to foreign governments (e.g., Libya) to maintain his lavish life style after stepping down as head of Project Coast.

Efforts to understand Basson's motives were complicated by the secrecy required by an ongoing criminal investigation and due to the government's desire to keep further details of Project Coast from being disclosed. Immediately after Basson's arrest at the beginning of 1997, his defense attorney claimed that the NIA had kidnapped him. NIA's response was that they were holding him in protective custody due to numerous death threats. Basson's attorney's submitted a 60- page bail application. Basson was eventually released. He went back to work at One Military Hospital in Pretoria. He still works there when his court case is not in session. The South African government has been paying his legal costs. As of August 2000, Basson's legal fees since his arrest in 1997 had cost the State 4 million rand (over \$500,000 in 2000 U.S. dollars).¹⁹⁸

Basson's bail hearing and related legal proceedings were closed to the public. The State was operating on the assumption that the legal proceedings would remain closed to the public throughout much or all of the criminal trial, which began in October 1999 and was expected to last until October 2001. This situation triggered a two-year legal effort by a non-governmental organization (NGO), the Freedom of Expression Institute (FIX), to make Basson's bail application open to the public. FIX filed a legal petition in 1997, after receiving a request from two newspapers, *The Sunday Times* and *Mail & Guardian*, to do something about the closed legal proceedings. FIX filed an application with the Magistrate Court as the sole plaintiff, because legal glitches precluded the two newspapers from filing as plaintiffs.¹⁹⁹

The State's position was that the bail application contained information negative for South Africa's foreign relations in three categories: 1) names of individuals who had not been charged; 2) names of countries mentioned in the bail application; and 3) the names of local people involved in Basson's business dealings. The Ministry of Justice insisted that the last category be kept secret, because to do otherwise would compromise ongoing criminal investigations. A second argument used by the State was similar to those heard during earlier efforts to keep the TRC's Project Coast hearings closed, to wit that information in the bail application would be in violation of the

BWC and CWC that South Africa had ratified and promised to uphold. NIA argued that classified information should not be released until it had gone through the normal declassification process.

FIX countered that much of this information was no longer secret, since it had already been made public by the TRC. They also noted that several reporters already had full transcripts from the hearings and had used this information in published press reports. On the day that the Regional Magistrate of Pretoria heard the bail request, several reporters were in the court until the Court went into camera session. FIX, now joined by several news organizations and an independent journalist, appealed to the Supreme Court. To support their position that much of the information in the bail hearing was already in the public domain, FIX prepared and presented a summary of the TRC hearings which included all information that had already been disclosed to the public.²⁰⁰

The Supreme Court ruled that most sessions of Basson's upcoming trial would be held in public. An agreement was reached among the parties to the legal action that the bail application, with only a few deletions related to potential defendants in future legal cases, would be made public.

When Basson's trial opened on 4 October 1999, the room was filled with South African and foreign reporters. The result was a flurry of press reports during the opening days of the trial. However, as the drama of the opening sessions waned, few reporters bothered to show up to cover the trial on a daily basis. The verbatim transcripts of the trial are recorded in Afrikaans and few individuals outside of court officials can afford the high cost of these transcripts.²⁰¹

Most of the major South African newspapers are not giving this case a high priority because they feel it is no longer newsworthy among a public suffering from "TRC fatigue." This means that only a few local papers are sending reporters, while the larger ones only send reporters when there is a high profile witness. Only one independent reporter who works for a South African NGO, the Center for Conflict Resolution (CCR) has been taking notes of daily proceedings.

The CCR has posted weekly and monthly summaries of the Basson trial on their web site, several weeks after the proceedings have been held. The summaries have become the primary continuous record of the case. South African and international observers must now rely on a single source for most

of their information on perhaps the most important case under the new constitution. It has become evident that the CCR is developing a sense of ownership of what is obviously public information. The presence of additional NGOs would produce a broader and freer flow of information.

The limited news coverage of the Basson case continued, even when the trial took the unprecedented step of shifting its venue to Jacksonville, Florida in September 2000. This unusual move was taken in order to hear evidence from American witnesses, including Basson's accountant, David Webster. However, no English-speaking national newspaper or international wire service covered the story.²⁰²

Several other aspects of the legal wrangling over the Basson bail application and subsequent court case may have relevance for those interested in promoting non-proliferation of weapons of mass destruction and democracy worldwide. It is notable that the move to open the Basson legal process to the public was taken by an NGO, with a small staff of 4-6 individuals. The past and current senior administrators of FIX are highly experienced civil libertarian activists, who worked for years against the *apartheid* regime in well-known NGOs.²⁰³

NGOs continue to play a useful watchdog role of criticizing governmental actions that may be placing unnecessary limitations on the rights of individuals in the new South Africa.²⁰⁴ Even the prosecutor in the Basson hearing, while downplaying the importance of this legal action in light of what has come out in public court, acknowledged that it was an important test of individual guarantees included in the new constitution.²⁰⁵

From the State's perspective, the legal action over bail took up too much of their time during two critical months when they were also trying to finish their criminal investigations of Basson. The prosecution had opposed publicizing the bail account because they wanted to continue investigating murder charges without publicity. They supported the NIA position that all documents should go through standard declassification procedures. In camera sessions of Basson's bail hearing, the State argued that holding court proceedings in public would endanger national security and individual lives.

The prosecution noted that the publicity surrounding the bail hearing had made the job of convicting Basson much more difficult. The trial judge had excluded a large number of documents during the opening sessions of the

trial that had been introduced during in camera sessions of the bail hearing on similar national security grounds that the prosecution had used.²⁰⁶

The Basson Trial: 1999-present²⁰⁷

The Basson trial promises to be one of the longest and most complicated trials in South African legal history. Basson was initially charged with multiple counts of fraud, murder, conspiracy to murder and possession of drugs (Ecstasy, Mandrax, and cocaine). However, the trial was quickly halted by objections presented by his lawyers. In hindsight, the most important objection raised by the defense related to conspiracy to murder charges against Basson for the poisoning of 200 SWAPO prisoners of war in a Namibian detention camp and his alleged involvement in the murder of five other SWAPO members in Namibia.

The defense argued that there was no precedent under South African law to charge citizens for actions in other countries and a general amnesty issued on the eve of Namibian independence in 1989 protected all South African police and military members from criminal prosecution prior to that date.²⁰⁸

By the second week of the trial, it had become clear the prosecution would experience serious difficulties in their efforts to win a conviction against Basson on murder charges. When the trial resumed, the presiding judge, Willie Harzenberg, ruled that six of the eight murder/conspiracy to murder charges against Basson had to be withdrawn on the grounds that the Criminal Procedure Act did not allow prosecution in a South African court for crimes committed in another country. He also ruled that Basson was indemnified from prosecution by the Namibian amnesty. The judge's decision to throw out these murder charges was a serious blow to the prosecution's case, since the five murder charges were the only ones that placed Basson at the scene of the crime.²⁰⁹ These rulings meant the prosecution would not be able to present accounts of the CCB's policies or methods of operations, which might have helped in proving Basson's motives in the remaining 14 murder/attempted murder charges.

The prosecutors were surprised by this ruling and have acknowledged that these rulings hurt the State's case. The ruling was surprising, because the same prosecutors had used a similar approach in presenting evidence in an

earlier case against Eugene de Kock, the former head of the CCB. In the de Kock case, the defense had not challenged the prosecutors' evidence. However, the Basson case is very different from that of de Kock where the prosecution was able to obtain the cooperation of most of de Kock's 25 subordinates who testified against their former commanding officer. Dr. Torie Pretorius felt that another important difference was the fact that he (Pretorius) had a close working relationship with local authorities and criminal investigators working for the Goldstone Commission in obtaining four witnesses for 100 of the 176 murder counts against de Kock.

What Pretorius learned from this experience was that the State would not win with only one cooperative co-conspirator, because the South African legal system was not set up to take on the old military establishment. In Basson's case, there are no multiple witnesses who can implicate Basson in specific murders. As Dr. Pretorius explained, "Basson was the only common denominator" in most of these conspiracy/murders. The lack of evidence explains why the State did not charge any of Basson's superiors. According to Dr. Pretorius, the lesson to be learned for prosecutors attempting to win conspiracy/murder cases involving CBW use is that the prosecutor must be at the murder scene as soon as possible and have a close working relationship with investigators on the ground.²¹⁰

The prosecution did not appeal the judge's rulings regarding amnesty or murders that occurred outside South Africa. Instead, Prosecutor Anton Ackerman, emphasized, after Basson had pleaded guilty to 61 charges, that most of these charges could not be considered *apartheid* crimes since they related to Basson's self enrichment schemes. Other witnesses have testified how Basson was the central figure in an international sales and procurement network that included arms deals involving the Libyan and Pakistani governments and drug deals. Several additional witnesses testified to Basson's involvement in manufacturing drugs and to his luxurious lifestyle.

Basson's financial dealings were extremely complex throughout the 10 years of Project Coast. The prosecution's charge sheet covering illegal money transactions runs several hundreds pages. The entire indictment spans two volumes. However, despite the complexity of these financial arrangements and the technical nature of many of the charges involving biological agents and chemical substances, the judge in this case did not

exercise his option under South African law of calling upon his own expert assessors.²¹¹

During the sixth week of the trial, the judge ruled that the State would not be allowed to use the record of Basson's bail proceeding in the interest of national security. The judge also issued several additional rulings that criticized the procedures used by OSEO investigators in their dealings with Basson. During the 10th week of the trial, Prosecutor Ackerman submitted a request for adjournment to permit the Director of Public Prosecutions time to study the trial transcript and decide whether or not to request that Judge Harzenberg recuse himself from the case. This motion caused a great deal of controversy and delayed the trial for several weeks.

When the trial resumed, Ackerman argued that South African law required a judge to be impartial, and that Judge Hartzenberg had shown bias on several counts. These included his rulings excluding evidence, his timing on ruling the inadmissibility of the record of Basson's bail application, and by denying the prosecution sufficient time to research jurisdiction issues. Hartzenberg, who under South African law rules on the recusal request, dismissed it on the grounds that it was "frivolous, mind-boggling, absurd and 'unfounded in its totality.'"²¹²

This was the first of several events, including Ackerman's absence from the trial for several weeks in subsequent weeks. Periodic bomb threats, which started in the sixth week of the trial, caused additional delays. These delays may be indicative of the types of judicial problems that can be expected when the judicial system of a new political order attempts to implement criminal charges against individuals who managed covert CBW programs.

The prosecutors have requested but have not yet seen the information on the CD-ROMs related to the BW program currently held by the President. The prosecutors are still waiting for a reply to their request to see this information from the Ministry of Justice. The prosecution's position is that all information should be declassified, even if it may endanger national security, if the information can be used to prove murder. While the prosecution remains convinced that they have enough evidence of fraud and abuse to convict Basson on multiple charges, others are beginning to wonder if the odds makers who are now betting that "Dr. Death" will not be convicted of any criminal penalties or financial fines might be right.

Implications of the Basson trial (as of March 2001)

The Basson trial to date illustrates some of the difficulties involved in criminal proceedings against individuals who were involved in covert CBW programs with extensive international linkages in national courts. Based on the recovered stolen documents, the prosecution is convinced that Basson established his own procurement network that included a large number of diverse individuals worldwide (e.g., Heyndrickx, Webster, Ford).

However, the prosecution has faced a number of obstacles in marshalling the evidence needed to prove that these actions constituted criminal acts. First, the prosecution had to obtain permission and funding from their government to undertake international investigations. Next, the prosecution had to win permission from federal and state authorities in the United States before they were able to examine relevant documents related to Basson's transactions held by his American auditor, David Webster. They then had to attempt to penetrate a web of complex dealings, since Webster, not Basson, was the Chief Executive of many of Basson's international holding corporations. In September 2000, the trial had to travel to Jacksonville, Florida in order to obtain the sworn statements of Americans they believe helped Basson to defraud the government because these foreign nationals had refused to return to South Africa voluntarily to testify.

The prosecution also had to send process servers to Canada to subpoena two former doctors who had worked on Project Coast in order to force them to appear in court. They, like many other doctors, scientists and former Special Forces officers with knowledge about Project Coast, had already emigrated from South Africa. In other cases, potential witnesses were never located. Even in cases where key South African witnesses were still living in the country, the prosecution frequently had to promise legal immunity in order to gain full cooperation as state's witnesses.

The area that gave the prosecution the most difficulty was uncovering evidence related to the large number of illegal drugs produced under the auspices of Project Coast and subsequently sold on the black market. During the third week of the Basson trial, South Africa Narcotics Bureau officers involved in the sting operation that led to Basson's arrest in January 1997 testified that before the deals involving Basson they had never encountered Ecstasy capsules in South Africa.

A pharmacist recruited to work at Delta G after his military service, Steven Buekes, told the Court that Basson had asked him to set up a facility to make Mandrax, including a laboratory where the base compound could be granulated. Buekes testified that he made 100,000 tablets, marked MX on one side and RL (for Roussel Laboratories, legal manufacturers of Mandrax) using ingredients supplied by Basson. Another witness, Jerry Brandt, was managing director of the front company, Organochem, that was responsible for procurement for Delta G. Mr. Brandt told the Court how he was tasked by Basson to procure the formula for manufacturing Ecstasy.

These and other witnesses allowed the prosecution to show that Basson had authorized the manufacture of large amounts of Mandrax and Ecstasy under the auspices of Project Coast. However, the State still does not know why these drugs were manufactured, where they went, or where the profits from the sale of these drugs went.

The prosecution does not believe the defense's claims that these drugs were only manufactured and used by Special Forces to incriminate suspected ANC "terrorists" and sympathizers, and later as a means of crowd control.

However, the prosecution is still missing many parts of the true story. What has come out in court to date is that Basson started producing hallucinogenic drugs during the mid-1980s. At some point the emphasis shifted to producing drugs for profit. However, the motives remain unknown, as do the targets (or customers), and the planned or actual methods of distributing these drugs.

There is little evidence that Mandrax and Ecstasy were produced for illegal sales in South Africa. Instead, the prosecutors are still exploring the possibility that the bulk of these drugs were destined for illicit sale in Europe, India, and possibly the United States.

South African officials investigating the flow of illegal drugs have been hampered by the lack of forensic capability to do chemical fingerprint tests.

Earlier investigations and the prosecutors in the Basson case failed in their first efforts to obtain the help of the U.S. Drug Enforcement Agency (DEA) in running these tests.

There was no real interest among American officials, until a drug arrest in Chicago that involved the illegal possession of Ecstasy traced back to South Africa. Apparently one of the innovative processes developed by Project Coast researchers was an extremely pure type of the drug that had a

unique root (e.g., no impurities). U.S. authorities were able to trace this particular sample back to Delta-G Laboratories. This incident led to greater international cooperation between U.S. and South African authorities involved in efforts to stem the flow of drugs internationally.²¹³

A similar pattern of heightened U.S. interest emerged after Dr. Ford's suicide in Newport, California in 2000. Revelations of links between Ford and his associates and Basson, Knobel, and Project Coast led the FBI to initiate a "weapons of mass destruction investigation" to determine whether a U.S. crime had been committed in South Africa.

Each of these experiences suggests that effective measures designed to limit the proliferation of CBW or illegal drugs in the future will require much greater inter-agency cooperation within nation-states and new forms of international cooperation among agencies in several countries. The South African case suggests the need for greater coordination between defense and counterproliferation agencies and agencies whose primary mission are crime solving and prevention.

The Basson trial is also useful for illustrating the complex ways that CBW project managers may be able to exploit transnational financial flows and international corporate instruments to quickly move, launder, and house large sums of money for either political or personal motives.

The Basson trial may also serve as a useful reminder of what may become a more general trend: the initiation or continuation of covert CBW programs primarily as a means to cover illegal personal gains from the sale of weapons (including CBW) and drugs.

VII. Conclusion

This monograph provides the profile of South Africa as a state that developed a CBW program. South Africa was an isolated state that felt threatened by a more powerful state actor, the Soviet Union, which was helping hostile regimes and movements in neighboring states. One response of the *apartheid* regime to changing threat perceptions in the region was to develop a CBW program and to accelerate a nuclear weapons program.

The decision-making process, which was secretive and controlled by the military, enabled a nuclear weapons program and a very sophisticated CBW program to be developed with little outside scrutiny. Military and police units used chemical and biological agents for counter-insurgency warfare, assassination, and execution of war prisoners.

As the regime felt increasingly threatened by opposition at home, top political leaders approved plans for research and development of exotic means to neutralize opponents, large-scale offensive uses of the program, and weaponization. However, the plans were not operationalized. The end of the external threat led to a decision to unilaterally dismantle the CBW program prior to a shift to majority rule.

Lack of civilian control over military programs made the rollback difficult, rife with corruption and may have permitted the transfer of findings and materials to other states.

Ultimately, the United States, Great Britain, and other countries pressured the South African government to ensure that the CBW program was dismantled and the former project manager, Dr. Wouter Basson, constrained. Since Basson secretly retained copies of Project Coast documents, concerns remain about whether he assisted other states by transferring and selling such information.

The information that has emerged to date about Project Coast suggests a country that possesses chemical and biological weapons is likely to use them against adversaries at home and abroad. The unpredictable, hot and windy environment of southern Africa did not discourage conventional military or counter-insurgency units from experimenting with these weapons.

However, in both the Angolan and Rhodesian conflicts, conventional arms remained the primary instruments by combatants. The South African case illustrates that the threat perceptions of top political leaders is the

determining factor in whether they decide to undertake costly, covert CBW research, development, and production programs. The South African case also supports the proposition that once a political regime has CBW capabilities, they may use these capabilities against political enemies both at home and abroad.

The South African case also dramatically shows how thin the line is between defensive and offensive weapons. First the Iraqi, and now the South African, cases suggest that it is prudent to assume that if a country is suspected of developing covert nuclear capabilities, it is probably supporting research into the offensive uses of chemical and biological weapons as well. If efforts are being made in the more challenging and expensive nuclear arena, why would a regime not develop the more accessible and less costly chemical and biological weapons?

South African CBW programs also underscore the importance of control by civilians, of transparency, and of accountability. Some aspects of the *apartheid* regime's management of their CBW programs may be unique. However, this case vividly illustrates what will happen when there is loose accountability of covert NBC research and development by senior military and political leaders. This is especially likely when the government is besieged both at home and on its borders.

The efforts to dismantle the South African CBW program illustrate how difficult effective NBC non-proliferation agreements will be to enforce. For many, the discovery that Wouter Basson secretly kept some of the classified documents is deeply disturbing to those who believe that South Africa developed highly sophisticated CBW capabilities during the Project Coast years.

For others, the science involved in the 10 years of research conducted by Project Coast was considered so pedestrian that they are not worried about the possibility of proliferation. These differing views of the program deserve further research and evaluation by CBW experts.

The likelihood that the South African government still possesses highly sophisticated CBW secrets, which it considers a "national asset," will remain a source of concern for the foreseeable future. As controls on arms sales erode and as high-level corruption increases, the chances that top officials might sell these secrets to states and/or groups of concern increases. The issue for counterproliferation experts is how to prevent such a transfer of deadly information from occurring.

Appendix A: Key Questions for Further Research on the South African CBW Program

1. What highly sophisticated biological agents/pathogens (including new ones) and unique processes and procedures did the South Africans develop under the auspices of Project Coast? Which ones did they acquire from abroad? From where?
2. Which unique processes and procedures developed under the auspices of Project Coast were surprising to the American investigators? (e.g., biological weapons, chemical weapons, drugs, germicides, and genetic engineering)
3. How important were each of the following to Project Coast developments: open-source literature, scientific contacts, and Basson's network of covert procurement agents?
4. Did the South Africans purchase poisons or chemicals abroad for use in their CBW program? Can a foreign government legally purchase similar chemicals and poisons today in the U.S., Canada, Europe, or elsewhere in the world?
5. What specific coordination/cooperation was there between the former SADF military CBW programs during the 1960s, 1970s, 1980s, and 1990s with foreign governments including U.S., UK, France, Germany, and Israel?
6. Where will the key scientists involved in Project Coast be in the future?
7. What type of delivery systems did South Africa develop to weaponize their CBW agents? How far did Project Coast go in developing aerosol means of delivering CBW?
8. Did the South African government field-test any biological agents or chemicals? If yes, which ones, where? When? Why?
9. What specifically and when did the U.S. and the UK learn about South Africa's biological weapons program? How?
10. How important was U.S. pressure in South Africa's decision to close down its bio-chem. capabilities? What type of pressure was most effective, i.e., bilateral or multilateral efforts?
11. Was Basson working with or without the knowledge of senior government officials when he visited Libya as a Transnet consultant? When he visited Iraq as a SADF colonel before 1990? To other countries?
12. Why was Basson arrested?
13. Why has the South African government not responded to the Basson prosecutor's request to gain access to the CD-ROM information related to Project Coast?

14. Why was so much Ecstasy and Mandrax produced? What was the methaqualone produced for Project Coast used for?
15. What happened to the drugs? Where were they distributed? Who got the money from drug sales or distribution?
16. Is there any evidence that Wouter Basson worked with foreign (i.e., Russian) or domestic organized crime syndicates?
17. In its genetic engineering experiments, how close was South Africa to a "black bomb"? Are other countries developing similar biological weapons?
18. Is there any evidence that the former South African government supported research, testing, or distribution of germicides designed to increase users' susceptibility to AIDS or other diseases?
19. Is there any truth to rumors that young, former Afrikaner right-wingers and former SADF and current SANDF personnel in South Africa are working with local syndicates and representatives of the Russian Mafia to market drugs and arms or hardware capable of using CBW?
20. How great a concern is South African NBC proliferation today? What are the concerns?
21. What is the danger that secrets are likely to leak out of South African National Defense Force or be sold in the future?
22. How effective is civilian control over the military (including control over former SADF officers who might be right-wing "moles" and ANC political appointees who might be hostile to the U.S. or anxious to increase their personal wealth)?
23. What is the basis for the contention by some in South Africa that, rather being a sophisticated CBW program, the South African CBW effort was "pedestrian and "fraudulent?"
24. Has any effort been made by anyone to investigate if Basson, et. al., could be tried in an international tribunal for crimes against humanity or war crimes?

Appendix B: General Policy Lessons Drawn from the South African CBW Case Study

Policy Lesson #1: *CBW proliferation is more difficult to prevent than nuclear proliferation.*

South Africa was able to build Project Coast, the “second most sophisticated” CBW program with little fanfare, whereas the nuclear weapons program was known and monitored by the international community from the late 1970s onwards. The most important factors influencing South Africa’s decision to develop CBW R&D, to approve Project Coast and upgrade it over time, and to plan weaponization were the changing threat perceptions of senior political and military leaders of the *apartheid* regime. The importance accorded CBW increased, as the country shifted from being a valued partner in the western alliance against communism, to one fighting insurgencies in neighboring countries, to an isolated, pariah state, under attack by guerrillas and opponents at home. While South Africa pursued CBW R&D before Project Coast, there were two main triggers for dramatically increasing the tempo: 1) the belief of South African political and military leaders that the Soviet Union or Cuban-backed forces in Angola and elsewhere might use chemical and biological weapons; and, 2) the increasingly violent and ubiquitous nature of political opposition in South Africa. This trend suggests two more general policy lessons:

Policy Lesson #2: *A country’s public statements, related to changing threat perceptions, are important indicators that a regime may be pursuing covert CBW programs.*

Policy Lesson#3: *If a government believes their enemy “may” possess CBW, it is likely to develop both defensive and offensive CBW capabilities. Since distinctions between offensive and defensive CBW capabilities are difficult to maintain, any country developing defensive CBW capability, is likely to be developing covert offensive CBW capabilities.*

South Africa’s acquisition of CBW capabilities and learning how CBW agents might be employed for counter-insurgency and assassinations were influenced by involvement in warfare in neighboring countries. As the tempo of guerrilla activities in Portuguese territories and in Rhodesia increased, South African financial support and involvement in counter-insurgency operations in neighboring countries also increased. There is considerable evidence that South African military and police personnel learned first-hand

from their involvement in Rhodesia's counter-insurgency operations in the 1970s how they might use poisons and biological viruses for assassinations and to contaminate water supplies used by guerrillas. South African involvement in the Rhodesian anti-guerrilla war provided training opportunities, strategies and tactics, and personnel connections for subsequent defense and police special covert units. This learning process influenced how the South African government dealt with domestic enemies, and suggests the following lesson:

Policy Lesson #4: *Once a country gains experience using CBW as a counter-insurgency warfare tactic abroad, it is more likely to develop and use these capabilities against political enemies at home and abroad.*

Although the extent of South African involvement in developing and using CBW in Rhodesia remains unclear, its alleged use in the 1970s is instructive for highlighting several aspects of CBW warfare. In the Rhodesian war, the effectiveness of biological and toxic agents as counter-insurgency weapons was highly variable. The Rhodesian case suggests that difficulties in identifying the perpetrators of biological attacks distinguish biological from nuclear or chemical warfare. Several biological agents, such as anthrax, are found in nature. Others (e.g., cholera) can be caused by factors other than a biological attack. Long-standing charges by Zimbabwean officials that South African and former Rhodesian forces planted anthrax spores in grain fed to cattle in guerrilla-held areas could not be substantiated. Continuing uncertainties underscore the difficulties that should be expected in future efforts to verify allegations of biological agent use. Recent statements by Zimbabwean officials that South Africa planted anthrax found today in rural areas underscore the fact that allegations of biological agent use may be a political disinformation technique for unpopular regimes.

Policy Lesson #5: *The effectiveness of biological agents as counter-insurgency or assassination weapons is highly variable. Several biological agents can continue to have serious long-term adverse effects for humans and the environment.*

Policy Lesson #6: *Allegations of the use of certain biological pathogens are difficult to verify, especially in developing countries where victims are likely to already be weakened by malnutrition, poor health, and other diseases.*

Policy Lesson #7: *Allegations of CBW might be used as part of “PSYOPS” campaigns in guerrilla conflicts or as a useful political disinformation technique for unpopular regimes decades after a conflict has ended.*

SADF experienced similar problems defending its forces against possible CBW attacks and in denying allegations that SADF was using CBW. In Angola, Namibia, and Mozambique, SADF experienced varying degrees of effectiveness, unintended consequences, and difficulties in documenting whether and who had initiated specific CBW incidents. In Angola, SADF troops faced increased costs and maneuverability problems, if they were to be forced to wear defensive CBW masks and uniforms that had to be changed daily. SADF troops avoided local water supplies in Angola and Namibia, because they lacked intelligence about whether water supplies had been poisoned. SADF experienced difficulties verifying alleged use of gas by Cuban-backed forces and rebutting allegations that SADF forces used CBW against SWAPO forces and refugee in camps in Angola and Namibia. Unconfirmed rumors persist that South Africa tested organophosphates, new generations of teargas, and a battlefield missile whose warheads were capable of being fitted with chemical or biological agents in Angola. Even though CBW effectiveness is doubtful in the harsh and unpredictable climate of southern Africa, SADF's experience suggests that CBW might be used anyway.

Policy Lesson #8: *The effectiveness of CBW is unpredictable and variable. Unintended consequences should be expected when used in harsh terrain and unpredictable climate zones.*

Policy Lesson #9: *While allegations of chemical agent use can be verified more readily than the use of many biological agents, verification difficulties should be anticipated, especially in areas where victims are already suffering from malnutrition, diseases, or general poor health.*

The threat of CBW use by enemies was an important trigger and justification for launching a major covert CBW program in South Africa. The primary rationale for the establishment of a new, covert CBW program was the victory of pro-Communist forces in Angola and Mozambique in the mid-1970s and the belief that the Soviet Union would bring its massive program to bear against the apartheid regime. This belief and the perception that the West had fallen behind the Soviets led the South African President, P.W. Botha and his military advisers to decide to race to build the most sophisticated and secret CBW program possible. These events suggest a general, albeit rather obvious lesson:

Policy Lesson #10: *If a country believes their enemy may have CBW capabilities, the country is more likely to engaged in intensive covert CBW programs.*

The existence of a separate medical branch, the SADF Medical Service (SAMS), that worked with Special Forces in Angola created the organizational basis for developing a highly secretive and loosely managed CBW program. South Africa's involvement in Angola provided the rationale for the reorganization within the military that ensured these new CBW programs were controlled by the military. From an administrative perspective, the reorganized SAMS had an equal status with the three existing branches of the military. A fear of CBW attacks in Angola led the government to issue a mandate to SAMS to develop defensive capabilities and to train SADF forces to protect themselves from all types of attacks, including biological and chemical. This mandate was the principal reason why managerial oversight and responsibility for a new CBW program was given to the 7th Battalion of SAMS. This case suggest that:

Policy Lesson #11: *The organizational context matters. The location of South Africa's CBW program within a separate medical corps, equal in status with other branches of the armed forces, appears to be a unique feature of this case. The organizational context should be carefully explored in other case studies.*

After South African troops left Angola, the SAMS mission changed and became more ambiguous. As SADF forces shifted from battlefield operations to policing functions at home, Project Coast R&D activities expanded and focused more on offensive uses of CBW against political opponents and guerrillas. Project Coast's manager, Dr. Wouter Basson, had a charismatic personality and professional reputation that helped him to be an effective recruiter of some of the most promising medical personnel and researchers from both the military and private sector. Most of these SADF-linked researchers and civilian scientists were *Afrikaners* who shared the same nationalist zeal and sense that their research was critical for maintaining national security. This feature of Project Coast suggests another policy lesson:

Policy Lesson #12: *CBW monitoring efforts should try to determine whether there are important shared characteristics of key personnel suspected of managing and working in covert CBW programs.*

Basson used state-owned and private corporations, international holding companies, and foreign bank accounts to operate projects under the auspices of Project Coast in a compartmentalized fashion. As he established

numerous officially sanctioned South African front companies and offshore holding companies, he set up his own independent network of procurement agents and contacts in foreign countries. These practices ensured that only Basson and a handful of his most trusted associates had complete knowledge of the full scope of Project Coast R&D activities and access to all financial accounts. Basson took advantage of the loose financial oversight and accountability requirements to purchase shares in the front companies and to earn huge profits when they were privatized. The magnitude of these profits, perhaps more than any other action, caught the attention of the Office of Serious Economic Offenses, which started investigating the financial flows associated with Project Coast soon after these corporations' shares were sold on the open market.

The major programmatic features of Project Coast were authorized by Basson's superiors in order to ensure that its varied R&D programs remained secret. While Basson had to account for financial expenditures tied to specific projects, there was no overall mechanism for reconciling the expenditures and outputs of various R&D programs. The use of public and private business entities and international financial accounts created opportunities for personal gain. Virtually from the inception of Project Coast, Basson and his associates moved to take advantage of secrecy for their personal gain. Secret organizations and weak independent accounting procedures provided Basson with incentives, resources, and rationales for a host of illegal activities. International contacts, procurement of equipment and supplies abroad, and the offshore financial shell corporations provided additional layers of complexity. This case suggests a more general lesson:

Policy Lesson #13: *Covert CBW programs may evidence similar complex corporate structures and financial practices, because transnational entities offer added protection for secret projects (as well as opportunities for personal gain).*

Project Coast's official mandate was to develop defensive measures and agents to protect the military. However, from the program's inception, Basson established several basic research programs designed to test and develop chemical and biological agents for offensive purposes. A top-level state committee approved Project Coast projects, the establishment of new front organizations, and the compartmentalization of each program. Senior political and military leaders left the details of management and day-to-day operations to Basson. He maintained exclusive but indirect control by

serving as a member the Board of Directors for each of these parastatal companies. Only a handful of senior research scientists, senior military officers, and politicians had a thorough view of the scope and activities conducted under Project Coast. Senior officials did not know the details and apparently did not want to know the details of Basson's organizations or activities. Even fewer individuals understood the financial details across holding companies and money laundering channels. Allegedly, Basson and his most trusted associates (e.g., his accountant) had a detailed and complete picture of the amount of money being spent, what the money was spent on, and who actually received secret public funds. This meant that there was no general reconciliation or independent accounting between the amount of money spent on individual programs and other types of expenditures. The management of Project Coast suggests a more general lesson:

Policy Lesson #14: *Covert programs that lack adequate accounting procedures or independent oversight encourage corruption and support for new, increasingly expensive projects.*

Despite evidence that Basson and his closest associates took advantage of Project Coast for personal gain, Basson's activities in creating new front companies, money-laundering channels, and his own network of sanction-busting procurement agents and money-launderers were approved by his superiors. Current evidence suggests that only a few senior military and political officials cooperated with Basson for personal gain. Most of the inner circle of securocrats who participated in authorizing additional R&D activities did so for political reasons. Basson is often characterized as the "mad doctor" undertaking rogue actions. However, Basson's activities were only one component of a comprehensive covert effort undertaken by the former *apartheid* regime to develop biological, chemical, and nuclear weapons and sophisticated delivery systems. In addition to his own network, Basson had used the existing government-run sanctions-busting networks that had been developed to supply South Africa's nuclear program. Project Coast also used ARMSCOR R&D facilities in operationalizing plans to weaponize CBW agents.

Much like the Iraqi case, the South African experience suggests that national efforts to build nuclear weapons capabilities go hand-in-hand with efforts to develop biological and chemical weapons.

Policy Lesson #15: *A country that is developing a nuclear weapons capability is likely to be pursuing chemical and biological weapons.*

Although Basson drew from the same pool of covert procurement specialists as were used by ARMSCOR, cooperation between Project Coast and ARMSCOR was very informal. Unlike the tightly managed nuclear program, Project Coast lacked adequate supervision or accountability requirements. There is some evidence that Basson worked closely with ARMSCOR and CSIR scientists to develop chemical agents that could be delivered in sophisticated missile systems. The picture now emerging is one of close and concerted efforts by several different parts of the South African defense establishment to develop weapons of mass destruction and the capability to deliver each type of weapon in missiles with varying range. These efforts were highly compartmentalized. Only a small number of individuals in the government and military had full knowledge of these efforts. Most senior military generals were only briefed on the scope of the country's CBW initiatives starting at the end of the 1980s. The "need-to-know" rationale of NBC programs in the South African case suggest another general lesson:

Policy Lesson #16: *The full scope of a comprehensive, covert NBC effort is likely to be known by only a small group of politicians, military leaders, and senior research scientists.*

While rumors could not be substantiated that the former South African government tested battlefield weapons capable of carrying biological agents and chemicals, we did find evidence that such weapons were planned and developed. Basson, much like his counterparts in other countries (e.g., Iraq), had difficulties developing effective delivery systems for using biological agents as weapons of mass destruction. While Project Coast researchers undertook conceptual studies in the aerosolization of biological agents, the evidence available to date indicates that sophisticated aerosolization delivery systems were not developed. Much more progress appears to have been achieved in developing sophisticated artillery warheads and tactical missiles that were capable of delivering NBC warheads. What types of missiles and warheads were built, possibly tested and sold abroad, remains among the most important unanswered questions related to South Africa's NBC programs. The facts about this case that have emerged so far suggests another general lesson:

Policy Lesson #17: *A country that is developing weapons of mass destruction will be likely to pursue the development of sophisticated means of delivery, including missiles of varying ranges that may be capable of carrying NBC warheads and aerosolization methods of delivering chemical and biological agents.*

As the threat from internal political enemies increased, top political leaders approved increasingly expensive and exotic CBW programs based on promises that they could be used to cope with domestic unrest. The senior political and military officials who authorized these programs did not want to know details about efforts designed to eliminate political opponents using CBW or more conventional means. Instead, the inner circle of “securocrats,” who authorized research on genetic engineering, birth control methods, and the use of chemicals to neutralize domestic opponents, operated on the basis of a largely informal system of norms and procedures. In some cases, approval was given using non-verbal communications, such as gestures or nods. There is also evidence that no explicit orders were necessary to prompt many military, police, and political officials to start destroying documents when the end of *apartheid* was in sight. Managers of several secret projects run under the auspices of Project Coast started destroying documents several years before these projects were ordered closed down. Thus, we may never know the full scope of activities conducted under Project Coast. This case provides an important illustration of the types of challenges that are likely to be faced by those working to limit chemical and biological weapons proliferation:

Policy Lesson #18: *Verification of past CBW programs will be difficult due to the intentional use of verbal, rather than written instructions, and by the destruction of documents long before national or international weapons inspectors arrive on the scene.*

The end of the “communist threat” in the late 1980s and the election of F.W. de Klerk were the major factors influencing South Africa’s decision to rollback its CBW program. De Klerk was committed to negotiating a managed political transition that would ensure that the Nationalist Party remained a significant actor within the next government. After entering office in 1989, de Klerk gradually obtained evidence about South Africa’s governmental involvement in “third force” activities that could not be ignored. Rumors of coups and a right-wing conspiracy to take control of the government and a growing fear during the early 1990s that the country might

descend into civil war created uncertainties and difficulties in terminating CBW programs. The Steyn report presented de Klerk with evidence of extensive abuse of power by the police and military, including operations run by Wouter Basson. De Klerk's reaction was to fire dozens of senior military officials. This move prompted a defensive reaction on the part of many military leaders and fueled additional efforts to cover up past misdeeds. As a top former general told us, "the shutters went down inside the South African military." Thus, de Klerk experienced difficulties regaining full civilian control of the military and in ensuring that all CBW agents were destroyed and secrets secured. This sequence of events suggests another policy lesson.

Policy Lesson #19: *Political leaders who attempt to close down NBC programs in political systems that lacked democratic oversight and a strong tradition of civilian control of the military are likely to have a protracted internal struggle in efforts to unilaterally terminate those programs.*

A number of outside actors, including the United States, United Kingdom and Israel shared the De Klerk government's concerns about what an ANC-dominated government might do with weapons of mass destruction.

These concerns led to a series of outside pressures and moves that were designed to ensure that the South African government completely dismantled their nuclear, chemical, and biological programs. As the ANC was poised to take power in 1994, the U.S. and UK were not satisfied that the program had been rolled back and feared that secrets would fall into the hands of adversaries. The U.S. and Great Britain took the unusual step of issuing a *demarche* and demanding investigation of Project Coast. A great deal of diplomatic effort was also directed at ensuring the completion of two South African confidence-building measures. However, the U.S. is still not confident that the CBW secrets will not be transferred. This sequence of events suggests the following policy lesson:

Policy Lesson #20: *Rollbacks of weapons of mass destruction are likely to require extensive outside pressures and take several years to complete.*

In South Africa, the rollback took several years to complete. The process of privatizing the major state-owned companies involved in these weapons systems started in 1989. At the start of 1993, Basson was put in charge of transferring Project Coast information to CD-ROMs. However, after Basson was dismissed from SADF, he made several trips to Libya, which raised proliferation concerns. As part of extensive pressure by the U.S.,

UK and other countries to completely rollback Project Coast, the Mandela government “rehired” Basson in 1995 in an effort to ensure that CBW knowledge did not fall into the hands of anti-western governments. Although the South African government assured the U.S. that CBW knowledge was under lock-and-key, the January 1997 discovery that Basson had in his possession large amounts of Project Coast-related documents, previously thought to have been destroyed, renewed fears of proliferation by Basson and his associates. Thus, the extent of official or unofficial proliferation from South Africa’s CBW program remains unknown. This case highlights two important policy lessons for future non-proliferation efforts:

Policy Lesson #21: *The complete dismantlement of CBW capabilities is extremely difficult to guarantee or verify, even in cases where governments have common interests in dismantlement and when the current government maintains a commitment to global nonproliferation.*

Policy Lesson #22: *The procedures a regime follows in dismantling its CBW program matter. Unilateral disarmament will not allay proliferation fears.*

TRC revelations, Basson’s arrest on drug charges, and testimony at the Basson trial suggest that there was extensive fraud and use of CBW facilities to produce illegal drugs. Still unknown are the intended uses of the drugs, where they went, and who authorized and benefited from their production and to what extent. This case suggests that CBW programs may be used as covers for a wide range of covert activities, including the illegal production and sale of drugs. Basson’s links with individuals in the U.S. and Europe suggest an important, but poorly understood transnational set of connections.

Revelations during the Basson trial have led European countries and the U.S. to initiate new investigations. Allegations in the Basson trial of fraud and use of CBW facilities to produce illegal drugs and evidence that crimes were committed in several countries suggest that future nonproliferation investigations are likely to involve multiple agencies, such as Scotland Yard, the CIA, and foreign ministries, in a number of countries.

In addition, CBW programs may be maintained because they serve as a useful cover for lucrative illegal operations for project managers and some senior military and political leaders, in addition to serving more traditional national interests. The South African case highlights the possibility that criminalization of future CBW programs may add a new complication to future nonproliferation and rollback efforts. Thus, new methods and approaches may need to be developed to monitor and control future CBW

programs that may operate as covers for illegal operations.

Policy Lesson #23: *Future nonproliferation efforts are likely to require greater cooperation among agencies in several countries in order to contain the spread of chemical and biological weapons knowledge.*

Policy Lesson #24: *New methods and approaches will be needed to monitor and control future CBW programs that may operate as covers for criminal networks.*

Appendix C

The “verkope lys” (sales list) referred to at Truth and Reconciliation Commission hearings. Provides the date of delivery of certain potential murder tools manufactured at the Roodeplaat Research Laboratory near Pretoria in 1989.

Date	Substance/Compounds	Volume/Quantity	Co-worker/ Co-ordinator
19-03-89	Phencyclidine (PCP) Thallium acetate	1 x 500mg 50g	Johny Koortzen
23-03-89	Phencyclidine (PCP)	5 x 100mg	Johny Koortzen
04-04-89	Aldicarb in Lemon Juice	6 x 200mg	Chris & others
04-04-89	Azide laced in Whiskey	3 x 1,5g	Chris & others
07-04-89	Vitamins D	2g	Chris & others
15-05-89	Vitamins D	2g	Chris & others
15-05-89	Cathardine	70mg	Chris & others
19-05-89	Thallium acetate	1mg	Chris & others
30-05-89	Phosphide tablets	30 tablets	Wouter Basson
09-06-89	Spores (splenic fever bacteria) on a letter	1 letter with spores	Wouter Basson
20-06-89	Capsules NaCN	50 capsules	Koos
22-06-89	Salmonella mixed with sugar	200g	Koos
27-06-89	Whiskey laced with Paraquat	1 x 75ml	Chris & others
20-07-89	HG -cyanide	4g	Koos
10-08-89	Azide 4g	Capsule cyanide 7	Koos
11-08-89	Cigarettes contaminated with B Anthracis (splenic fever bacteria)	5 cigarettes	Chris & others
11-08-89	Coffee chocolates laced with B Anthracis (splenic fever bacteria)	5 chocolates	Chris & others
11-08-89	Coffee chocolates laced with Botulinum (bovine para botulism bacteria)	5 chocolates	Chris & others

11-08-89	Peppermint chocolates laced with Aldicarb toxin	3 chocolates	Chris & others
11-08-89	Peppermint chocolates laced with Brodifacoum toxin	2 chocolates	Chris & others
11-08-89	Peppermint chocolates laced with Cathardine toxin	3 chocolates	Chris & others
11-08-89	Peppermint chocolates laced with Cyanide	3 chocolates	Chris & others
16-08-89	Capsule Propane NaCN	7 capsules	Koos
18-08-89	Formalin & Pyridine	30 phials of 50ml	Koos
05-09-89	Cathardine powder in a bag	10mg	Koos
08-09-89	Methanol	3 phials of 30 ml	Koos
08-09-89	Mamba toxin	2mg	Koos
18-09-89	Whiskey laced with 50 ml colchicine	75mg	Chris & others
06-10-89	B. melitensis c Brucellosis bacteria - Malta fever bacteria	1 x 50	Koos
06-10-89	S. typhimurium laced in deodorant	1 can	Wouter Basson
21-10-89	B melitensis c Brucellosis bacteria - Malta fever bacteria	Quantity unknown	Koos
21-10-89	Salmonella typhimurium laced in deodorant	1 tin	Wouter Basson

During 1990, Dr Immelman, at the request of the accused (Wouter Basson), provided the accused with a drug bacteria that could be mixed in Coke.

Notes

1. Edward Regis, *The Biology of Doom: The History of America's Secret Germ Warfare Project* (New York: Henry Holt, 1999). Albert J. Mauroni, *America's Struggle with Chemical-Biological Warfare* (Westport, Conn.: Praeger, 2000). Erhard Geissler, et. al., eds., *Biological and Toxin Weapons: Research, Development and Use from the Middle Ages to 1945* (New York: Oxford University Press, 1999). Ken Alibek, with Stephen Handelman (Contributor) *Biohazard*. (New York: Random House, 1999). Tom Mangold and Jeff Goldberg, *Plague Wars: A True Story of Biological Warfare* (New York: St. Martin's Press, 1999). John Prados, "All Weapons Great and Small," *Washington Post, Book World*, 16 January 2000, 7.
2. Interview with Dr. Renfrew Christie, Cape Town, South Africa, 26 June 2000.
3. Mangold, *Plague Wars*, 219.
4. Interview with Dr. Christie, 26 June 2000.
5. Interview with General (retired) Jannie Geldenhuys, Pretoria, South Africa, 13 June 2000.
6. H.E. Purkitt, "The Politics of Denuclearization: The Case of South Africa". Presentation at the Defense Nuclear Agency's Fourth Annual International Conference on Controlling Arms, Philadelphia, Penn., 21 June 1995. (Earlier draft presented at Institute for National Studies (INSS), U.S. Air Force Academy, Colorado, 9 November 1994.
7. Interview with Dr. Vernon Joynt of Mechem (explosives warfare program) and the Council for Scientific and Industrial Research (CSIR), Pretoria, South Africa, 14 June 2000.
8. Interview with Dr. Torie Pretorius, prosecutor in the Basson trial, Pretoria, South Africa 21 June 2000.
9. Interview with Helmut Heitmann of *Jane's Defense Weekly*, Cape Town, South Africa, 26 June 2000. Heitmann and other analysts subsequently echoed De Villiers' skepticism about the usefulness of chemical and biological weapons in Africa. In the 1980s, Heitmann commented that chemical weapons were ineffective in Africa, given the heat, and the possibility that shifting winds could blow the agents onto one's own troops. Biological weapons could be delivered through food and water, but the weapons could spread into one's own population.
10. Interviews with former South African military and civilian officials, July 2000, including Gen. (ret.) Geldenhuys and Dr. Joynt.
11. Henrik Ellert, *The Rhodesian Front War: Counter-Insurgency and Guerrilla war in Rhodesia 1962-1980* (Gweru: Zimbabwe: Mambo Press, 1989). See Mangold, *Plague Wars*, pp. 218-23.
12. For a further discussion of the role of former Selous Scouts and other foreigners in South Africa during the 1980s see Mangold, *Plague Wars*, pp. 218-23. See also Ellert, *The Rhodesian Front War*.

13. *Analysis of the TRC Report by the SADF Contact bureau, 28 May, 1998, Pretoria, South Africa and The Military in a political arena: The South African Defence Force (SADF) and the Truth and Reconciliation Commission (TRC). Pretoria, June 2000.*

14. There was a general awareness during the 1960s of the potency of anthrax and other biological agents as counter-insurgency weapons. In the 1960s, comic books featured "Captain Devil" who poured anthrax into the Orange River and killed communist guerrillas, according to Dr. Ian Phillips, ANC defense expert, interviewed, 13 June 2000 in Pretoria, South Africa.

15. South African military and political planners during the late 1960s and early 1970s studied carefully the effectiveness of Portuguese "protected villages" in preventing guerrillas from gaining control of large sections of Angola. However, South African planners viewed a guerrilla threat at home to be highly unlikely at the time (Interview with Rocklyn Williams, 5 July 2000). In planning for the long-term possibility of guerrilla activity, the government moved to expand the Bantu homeland policy to Lebowa and Venda and instituted policies to depopulate northern areas of South Africa. This approach was viewed as a more effective way of handling future problems and deflecting external critics with a promise of eventual independence for the ten designated homelands.

In Angola, South African military planners, however, were impressed by the ability of the Portuguese to regain the offensive in the late 1960s by using helicopters, poison, landmines, and other techniques to counter guerrilla gains. See John Marcum, *The Angolan Revolution: Exile Politics and Guerrilla Warfare, 1962-1976* (Cambridge, Mass.: MIT Press, 1978, pp. 116-118).

16. Interview with Dr. Ian Phillips, ANC defense expert, 13 June 2000.

17. The South African Police (SAP) started helping the Rhodesians to counter growing insurgency problem in the mid-1960s. Until 1974, the number of SAP (and SADF) personnel grew, until there were about 1,200 SAPs stationed in Rhodesia. While South African help was welcomed initially, tensions quickly developed with reports that SAP personnel were illegally shooting rhinoceroses for the horns in Chiwore game reserve and that they were ill-disciplined, bored, and poorly trained. The first SAP contingents were relieved after three months. South Africa attempted to solve the problem by sending better-trained and more English speakers to Rhodesia. Tensions developed again as Rhodesians increasingly had to rely on South African manpower and military hardware in the early 1970s. Many Rhodesian troops resented South African efforts to tell them how to conduct their counter-insurgency campaigns. These tensions were one reason why the South African police presence was reduced during the 1970s [Interview, Defense Intelligence Agency (DIA) officials, Washington, D.C., 13 September 2000]. See also Ellert, *The Rhodesian Front War* and Ron Reid-Daly, with Peter Stiff, *Selous Scouts: Top Secret War* (Alberton, South Africa: Galago, 1983) for detailed accounts of these tensions.

18. Reid-Daly, *Selous Scouts*.

19. Ellert, *The Rhodesian Front War*. He claims that the Selous Scouts experimented with throwing cholera viruses in rivers but could not detect any adverse effects associated with this experiment. He reports that in 1976, a group of Scouts moved into the Ruya wildlife area near Mozambique and introduced measured quantities of bacteriological cultures into the water at several points along the Ruya river. Although the Scouts never knew if any fatalities resulted from these experiments, Ellert notes that these experiments corresponded in time with reports of deaths among people living on the banks of the Ruya River in Mozambique. These deaths were officially attributed to cholera (p. 12).

20. Mangold, *Plague Wars*, 214-218.

21. Interview with Jakkie Cilliers, Director of the Institute for Security Studies (ISS), Pretoria, 12 June 2000. The South African State in the Basson trial is planning to use information gathered by journalists to support charges against Basson related to the use of CBW in Rhodesia. However, the prosecution was unable to discuss this evidence while the trial is ongoing. Interview, Pretoria, July 2000).

22. Ellert, *The Rhodesian Front War*, 90-3; Interview with Peter Stiff, 12 July 2000.

23. From 1978 until independence the South African intelligence service stepped up their efforts to recruit experienced Rhodesian Special Forces, Ellert, 90.

24. Jacques Pauw, *Into the Heart of Darkness* (Johannesburg: Jonathan Ball, 1997). South Africa. Truth and Reconciliation Commission, *Truth and Reconciliation Commission of South Africa Report*. (Cape Town: The Truth and Reconciliation Commission, 1998).

25. Ellert, *The Rhodesian Front War*, 111-113.

26. Mangold, *Plague Wars*, 214-23. See also Meryl Nass, "Anthrax Epizootic in Zimbabwe, 1978-1980: Due to Deliberate Spread? *The PSR Quarterly* vol. 2 no. 4 December 1992.

27. "Basson anthrax link to Zimbabwe," <http://www.saep.org/forDB/WARanthrax,ZANNOW990331.htm>.

28. Many biological warfare experts discount the claims made in *Plague Wars* that Rhodesian and/or South African forces planted anthrax spores in black farming areas in Rhodesia/Zimbabwe. In black farming areas under rebel control, there was no wildlife control or regular cattle dipping. During this period, there was a noticeable rise of rinderpest and other cattle diseases. According to Richard Cornwall, a senior defense analyst and expert on Zimbabwean politics at ISS-South Africa, "everything just broke down" (Interview, 4 July 2000). Under these conditions, it would have been extremely difficult to limit the effects of anthrax to only certain areas.

Mangold cites a DIA report to support allegations that anthrax was planted in cattle feed in Rhodesia/Zimbabwe. However, Dr. Bill Thom, Director of the African division of DIA, conducted a search of DIA files at the request of the authors and found that the DIA document number cited in *Plague Wars* was a citation for a regulation manual that had

nothing to do with Africa or biological weapons (Interview, Bill Thom, 13 September 2000). Apparently, Mangold erred when citing a DIA report, or the document never existed.

However, Mangold is confident that such experiments occurred, and it is possible that this strategy was one of the many BW experiments carried out by units of Selous Scouts in their quest to find new counter-insurgency tools. Regardless of the veracity of the allegations, the case is useful for illustrating how difficult it is to prove or disprove allegations of anthrax attacks. For a further discussion of the available evidence in this and other recent incidents of alleged use of anthrax as a weapon see Seth W. Carus, *Working Paper on Bioterrorism and Biocrimes: The Illicit Use of Biological agents in the 20th Century*. 3rd Revision. (Washington, DC: Center for Counter-proliferation Research, National Defense University, 1998).

29. The Mugabe government has become most unpopular in Zimbabwe. In the June 2000 parliamentary elections, Mugabe's party, ZANU (PF), lost control of all urban seats and all parliamentary seats in Mataberland.

30. Mangold, *Plague Wars*, 220.

31. The Cassinga raid highlights the difficulties involved in verifying CBW incidents. The TRC concluded that this alleged use was developed under auspices of Project B. A report on the Cassinga attack was prepared by a joint UNHCR/WHO mission on 30 May 1978 and reproduced as Annexure V in UN document 13473 of 27 July 1979. However, observers who arrived 30 minutes after the attack say they found no evidence of chemical weapons use. (Interviews with former SADF special forces officers and defense analysts, July 2000).

32. Interviews with former SADF Special Forces officers, July 2000

33. Interview with Dr. G. Scharf, former Director of Medical Hospital One (Pretoria), 6 July 2000.

34. Interview with Gen. (ret.) Georg Meiring, Pretoria, 3 July 2000.

35. Interview with former Defense Minister Magnus Malan, Pretoria, 23 June 2000.

36. Interview with Brig. Gen. (ret.) Bill Sass, Pretoria, 12 June 2000. This rationale for developing nuclear weapons is the one most frequently mentioned by former SADF generals and some former politicians. For a further discussion of other rationales that have been provided by South African officials during and after the *apartheid* era, see Badenhorst (unpublished manuscript), Hounam and McQuillen (1995), Reiss (1995), and Stumpf (1995/96).

37. According to Brig. Gen. (ret.) Phillip Schalwyk, South African forces in Angola received an urgent cable from UNITA commanders during Operation Savannah asking for help because they had been attacked by Cuban troops who wore "pig face masks." Interview, 12 July 2000.

38. Annette Seegers, *The Military in the Making of Modern South Africa*. (New York: St. Martin's Press, 1996).

39. Interview with Magnus Malan, 23 June 2000.

40. Interview with Dr. Vernon Joynt, Pretoria, 14 June 2000. Dr. Joynt claims that Surgeon General Nieuwoudt sent Major Wouter Basson to him in 1978 and offered him the directorship of a chemical weapons program. While Joynt refused, many scientists and specialists accepted research projects by Nieuwoudt and Basson, and many did not tell their superiors.

41. Seegers, *The Military*. See also S.A. Watt, "The Anglo-Boer War: The Medical Arrangements and implications thereof during the British occupation of Bloemfontein: March-August, 1900," *Military History Journal* Vol. 9 No. 2 (August). South African Military History Society / military.history@rapidhttp.com. (Accessed 15 June 2000).

42. Interview with Dr. G. Scharf, former Director of Military Medical Hospital One (Pretoria), 5 July 2000. Although the 7th Medical Battalion Group is still in existence and tasked with the mission of supporting the 44th Parachute Brigade and Special Forces Brigade, the military medical service has undergone a dramatic reorganization since 1994. Authorization for a re-organized service, renamed the SADF Medical Service (SAMS) was approved by the Minister of Defense in March 1999. SAMS has a much broader mandate today that includes providing assistance to the health services of South Africa, in addition to providing comprehensive military health service to the National Defence Force and South African Police Service.

43. In an interview in Pretoria on 13 June 2000, Gen. (ret.) Chris Thirion stated that he first met Basson when the latter was earmarked in the late 1970s to become the doctor for SADF Special Forces. Thirion claims that Basson was arrogant, that he was Defense Minister Magnus Malan's "blue-eyed boy," and that he had the ear of General Kat Liebenberg of Special Forces. Thirion complained when Basson was given access to military intelligence and when Basson short-circuited the command structure. Thirion continued by commenting that, in the 1980s, Malan became a member of parliament and started the custom of showing people in his constituency that the SADF was winning the war in Namibia and Angola. He would bring generals from each branch of the service. However, Basson represented the Medical Health Service and not the Surgeon General.

44. According to ANC defense expert Dr. Ian Phillips, interviewed 13 June 2000, Dr. Basson was a "Dr. Strangelove" who was part of a group of young scientists, specialists, intellectuals and soldiers who emerged in the 1970s and enthusiastically supported the *apartheid* regime. Their "patriotism" provided them with the motivation to commit "perfect crimes" on behalf of the regime. Later, some members this group would claim that they were "only following orders."

Others, such as Dr. Daan Goosen, who was the managing director at RRL, remain unrepentant noting that "South Africa was in a war situation...the terrorists and political

figures were the targets on the ANC side.” Dr. Goosen went on in this interview to explain that Basson spelled out to him, at the time they were negotiating Goosen’s employment, “that it would be a biological chemical weapons program [and that] it would be offensive. We initially spent a lot of time on the ethical use of these things, and I was convinced that the products would be used in a war sense, very ethically. There isn’t much of a difference if you use a gun to kill someone or if you use a more refined product to do that.” *Frontline transcripts from Plague Wars: A report on biological weapons threats and how the Soviet Union secretly amassed an arsenal of bio-weapons*. Transcript from television show <http://www.pbs.org/wgbh/pages/frontline/shows/plague/sa/>.

Many individuals, who worked on Project Coast or had contact with Basson within the military, including most former SADF generals and officers, continue to respect him as a brilliant heart surgeon. Many of these individuals assert that Basson did nothing wrong since all of his actions, including the alleged fraudulent ones, were approved by superiors. Others stress that they did not know specifics about most Project Coast programs or Basson’s financial activities until press revelations started to appear in the 1990s.

45. Interview with Magnus Malan, 23 June 2000.

46. See Lt. Gen. (Dr.) D.P. (Niels) Knobel’s testimony to the Truth and Reconciliation Commission (TRC), July 1998.

47. Chris Oppermann, “How the taxpayer footed the bill for Project Coast,” *Weekly Mail and Guardian* archive, 27 June 1997.

48. According to Helmut Heitmann, *Jane’s Defense Weekly* and defense expert, in a 26 June 2000 interview, the evidence was not conclusive.

Heitmann was among the first journalists to raise questions about South African allegations that the Cubans had used chemical weapons in Angola and highlighted the difficulty of verifying the source of alleged CBW attacks (Heitmann, 1985, 1990; see also Steenkamp, 1989).

49. Interview with Magnus Malan, 23 June 2000. Despite concerns by senior military leaders about the possibility that Cubans might use CBW in Angola, little time was spent on defensive CBW training during the 1970s. From the mid-1970s through the late 1970s only a few hours during one day of training was devoted to CBW of SADF infantry personnel. Most of these sessions focused on the use of CS gas. Many more hours of training were devoted to how to counter urban violence. Interview with Mark Malan, former SADF officer and senior researcher at the Institute for Strategic Studies-South Africa, 23 June 2000.

50. According to Chandre Gould, formerly of the TRC, interviewed 29 June 2000 in Johannesburg, South Africa.

51. Mangold, *Plague Wars*, 236. They estimate four to five million pounds.

52. Interview with Dr. Ian Phillips, 13 June 2000.

53. Interview with Rocky Williams, ISS-South Africa, 5 July 2000.

54. Interview with Gen. (ret.) Meiring, 3 July 2000.
55. Mangold, *Plague Wars*, 243.
56. Mangold, *Plague Wars*, 241.
57. Mangold, *Plague Wars*, 243.
58. Interview conducted in 1997 by Helen Purkitt.
59. Magnus Malan indicated as much in a 23 June 2000 interview.
60. According to Dr. Rocklyn Williams of ISS, Pretoria, interviewed 15 July 2000, he debriefed a SADF sergeant in 1983 who talked about the development of a "black bomb."
61. Mangold, *Plague Wars*, 244.
62. Mangold, *Plague Wars*, 244. In an interview for the television documentary, Dr. Daan Goosen again acknowledged that the target of Project Coast's work on drugs that would induce infertility was the black population. One line of research was to develop a vaccine, one for males and one for females that could be given surreptitiously or under another pretext. This research was based on open source contraceptive research. Another line of research was work on a [unnamed] product that could have been given without the knowledge of the person receiving it either orally or in some sort of injection. He went on to state, "the most serious problem as told to us [was] the birth rate of the black population, and that it would outgrow the resources of the country and it was very important that this be brought under control. There was no doubt about that. This was given to us by Basson, by the surgeon general...it was very clear that this was the most important project we had to work on." *Frontline transcripts from Plague Wars: A report on biological weapons threats and how the Soviet Union secretly amassed an arsenal of bio-weapons*. Transcript from television show <http://www.pbs.org/wgbh/pages/frontline/shows/plague/sa/>. (Accessed 15 June 2000)
63. Interviews with a South African journalist, 20 July 2000.
64. According to Chandre Gould, formerly of the TRC, in a presentation, 29 June 2000.
65. Interviews with retired generals Thirion and Geldenhuys, Pretoria, 13 June 2000.
66. Interview with Gen. (ret.) Meiring, 3 July 2000. As a subscriber to the 1925 Geneva Protocol, South Africa could not legally develop lethal CW agents.
67. Interview with Gen. (ret.) Meiring, 3 July 2000.
68. Interview with Col. (ret.) Johann Smith, Pretoria, 30 June 2000. He was certain that the MPLA and Cubans used CW in Angola.
69. Interview with Gen. (ret.) Thirion, 13 June 2000.

70. Interview with Gen. (ret.) Sass, 12 June 2000.

71. Interview with Gen. (ret.) Geldenhuys, 13 June 2000.

72. Interview with Gen. (ret.) Meiring, 3 July 2000.

73. Interview with David Steward, June 26, 2000.

74. Gen. (ret.) Meiring, interviewed 3 July 2000. Meiring was not certain if the Cubans and the MPLA used CW at Cuito Cuanavale in 1987.

75. Soon after his investigation, reports emerged that Dr. Heyndrickx manufactured allegations that the Angolans were using CW and that he was on the payroll of the South African government or the CIA. In 1997, *Weekly Mail and Guardian* reported that Dr. Heyndrickx had been arrested for misusing funds at the University of Ghent and that the Belgian police are still looking for 12 British-made chemical agent monitors which Heyndrickx bought with university funds. He said he destroyed the machines because they were defective.

76. Gen. (ret.) Meiring, interviewed 3 July 2000.

77. Testimony by Dr. Mike Odendaal in the Basson Trial, 24 May 2000. See "HIV Blood Sample Frozen for Chemical Warfare, Basson Trial Hears," *South African Press Association (SAPA)*, 24 May 2000.

78. Mangold, *Plague Wars*, 243.

79. Mangold, *Plague Wars*, 242.

80. Dr. Basson told Mangold (*Plague Wars*, 442, note 443) in 1998 that the reason why a detailed investigation by Britain's MI-6, the Security Service, failed to substantiate the allegations that he visited Porton Down is because he used false names and passports for his frequent visits. Another possibility is that Basson met with former Porton Down employees. Several former employees of Porton Down report that they were asked to pose as employees after reporting contacts with Wouter Basson to British authorities. See Michael Evans, "South Africa may have ordered British deaths," *The Times (London)*, (14 July 1998), 7 for further details.

81. Testimony by Dr. Odendaal, 24 May 2000. See "HIV...," *SAPA*, 24 May 2000.

82. Interview with former South African military officer, who will remain anonymous, July 2000.

83. Ambassador Princeton Lyman, e-mail to Stephen Burgess, 18 September 2000. Ambassador Princeton Lyman backtracked somewhat from earlier statements made in a 31 August 2000 interview about claims that weaponization took place. Donald Mahley of the U.S. State Department, who was part of the delegation to South Africa after the *demarche* of 11 April 1994, also downplayed evidence of weaponization in a 30 August 2000 interview.

84. Professor Andre Buys, Director of Institute for Technical Innovation, University of Pretoria, in a 14 June 2000 interview.

85. Professor Buys, in a 14 June 2000 interview.

While the project manager for the nuclear bomb project was aware of ongoing research into chemical weapons (in an interview with Helen Purkitt, July 1994), even he did not have full access to the details of specific CBW projects.

86. H.E. Purkitt, "The Politics of Denuclearization: The Case of South Africa". Presentation at the Defense Nuclear Agency's Fourth Annual International Conference on Controlling Arms, Philadelphia, Penn., 21 June 1995. Earlier draft presented at Institute for National Studies (INSS), U.S. Air Force Academy, Colorado, 9 November 1994.

87. Interview with Brig. Gen. (ret.) Bill Sass, 3 July 2000.

88. Interview with Gen. (ret.) Thirion, 13 June 2000. Thirion claimed that he had proposed a *gendarmierie* or *carabinieri* to serve as the "third force." Instead, P.W. Botha, Magnus Malan, and Adriaan Vlok devised the Civil Cooperation Bureau (CCB) and other agencies that were more covert and far more lethal.

89. Interviews with Generals Thirion and Geldenhuys, 13 June 2000.

90. Interview with David Steward, Executive Director, De Klerk Foundation and President de Klerk's chief of staff (1989-94), Cape Town, 26 June 2000.

91. Mangold, *Plague Wars*, 242. Skepticism still surrounds Basson and Knobel's claims about Basson's international activities. According to several interviewees, it is doubtful if Basson ever penetrated Porton Down or U.S. and Soviet facilities.

92. According to Gen. (ret.) Sass, interviewed 12 June 2000 in Pretoria.

93. According to Gen. (ret.) Sass, interviewed 12 June 2000 in Pretoria.

94. Arthur Allen, "Mad Scientist," *Salon.com* (<http://salonmag.com/health/feature/2000/06/26/biofem>), 26 June 2000 (accessed 9 August 2000). It has only been in the last few years that researchers have renewed their focus on finding an effective microbicide (a chemical that can kill off the virus). Three dozen microbicides are now in the pre-clinical testing stage, and 20 others are ready for safety trials in humans. Researchers were hoping that nonoxynol-9 was the answer. However, in July of 2000, microbicide researchers from UNAIDS discovered to their horror that the spermicide nonoxynol-9, a chemical found in many contraceptives, lubricants, and gels worldwide, is not only ineffective against HIV, it actually appears to increase the chance of infection in high-risk women. Of 999 prostitutes in Africa and Thailand, 59 women using a nonoxynol-9 contraceptive gel called Advantage-S became infected with HIV, compared with 41 women using a placebo. Claudia Kalb, in "We Have to Save Our People," *Newsweek*, 24 July 2000 posed on afro-nets@usa.nealthnet.org, July 17, 2000.

95. Jeff Collins, "Suspects all visited the home of a South African trade official, police say," *Orange Country Register*, (July 18, 2000). Dr. Ford, Dino D'Saachs and Dr. Jerry

Nilsson, who are all suspected of conspiring to kill Biofem Inc. chief executive James Patrick Riley, visited the South Africa trade attaché, Gideon Bouwer in the 1980s.

96. Arthur Allen, "Vaginal Detergent," *Salon.com* (<http://salonmag.com/health/feature/2000/06/26/biofem>), 26 June 2000 (accessed August 9, 2000). (<http://salonmag.com/health/feature/2000/06/26/biofem>), 26 June 2000 (accessed August 9, 2000). Jeff Collins, "Suspects all visited the home of a South African trade official, police say," *Orange Country Register*, (18 July 2000).

97. Interview with Dr. G. Scharf, former Director of Medical Hospital One (Pretoria), 6 July 2000.

98. Jeff Collins "Suspects all visited the home of a South African trade official, police say" *The Orange County Register*. (July 18, 2000). This article cites a *Sunday Times* interview with Knobel, in which he confirmed that he relied on Ford's expertise whenever he had questions about chemical or biological weapons and said that he helped Ford and Riley gain approval for the use of products produced by BioFem. Knobel also confirmed that he introduced Ford to Wouter Basson, who arranged a briefing with Project Coast scientists and Dr. Ford at Fort Klapperkop outside Pretoria in June or July 1987 where he demonstrated how to lace teabags, doilies and even a *Playboy* magazine with deadly bacteria. A new project, codenamed Project Larry, was started around the time of Ford's visit but was closed within a few months. While Dr. Knobel reports no knowledge of a Project Larry, Adriaan Botha, a Project Coast scientist who attended this briefing, reported that Ford sent them five bags of biological material they hoped to cultivate into organisms that could be used to kill the enemies of *apartheid*. Jeff Collins "Ford advised South Africa on warfare devices," *Orange County Register* (15 March 2000).

99. Arthur Allen, "Mad Scientist," *Salon.com* (<http://salonmag.com/health/feature/2000/06/26/biofem>), 26 June 2000 (accessed August 9, 2000)

100. See Andrew Bluth and Tony Saavedra "The materials are collected at the home of Jerry Nilsson, who was questioned and released," *The Orange County Register*, April 2, 2000 and Tony Saavedra "Surgeon says he doesn't know why he was subjected to a search," *The Orange County Register*, April 5, 2000

101. There were also allegations that Ford may have tested his birth control product on prostitutes in South Africa. Julian Rademeyer "Illegal tests on SA prostitutes?" *Pretoria News*, 22 July 2000 (<http://home.global.co.za/~jrad/ptabio.htm>) and Arthur Allen, "Mad Scientist," *Salon.com* (<http://salonmag.com/health/feature/2000/06/26/biofem>), 26 June 2000 (accessed August 9, 2000). See also articles in *Los Angeles Times* and other newspapers in Mad Scientist archive on Project Coast on the Mad Scientist web page (<http://www.madsci.org>).

102. Interview with South African prosecutor in the Basson case, July 2000.

103. Interview with a former TRC investigator, 20 July, 2000. In addition to scientific literature, papers from scientific conferences, and government documents marked top secret, investigators found financial records, canceled checks, bags of foreign coins, memorabilia (e.g., a cartoon of Basson carrying a violin case), and several small bottles of scotch and beer cans, which they did not taste. The contents in these trunks were really a "mixed bag" of personal effects and top-secret documents.

104. Interview with a former TRC investigator, 20 July, 2000.

105. Mangold, *Plague Wars*, 277-8.

106. Dr. Daan Goosen, former managing director of RRL, claimed that Project Coast never conducted research on HIV as a weapon. However, he acknowledged that Project Coast scientists were planning to do some work that he termed "legitimate work" for a European pharmaceutical company. Interview Transcript from television show <http://www.pbs.org/wgbh/pages/frontline/shows/plague/sa/> (accessed 15 June 2000)

107. Interview with South African reporters who covered the TRC hearings, July 2000. Despite the lack of evidence linking Project Coast research with the intentional use of AIDS, allegations that the policies of the former South African government were motivated by AIDS considerations are likely to be raised in the future, as the HIV epidemic peaks in South Africa. For example, one researcher at the International AIDS conference held in Durban in July 2000 suggested in a paper that projections of huge losses in the black population through AIDS was the real reason why de Klerk had started transition process.

108. As Daan Goosen noted, "biological weapons was a new field, and it was done all over by all countries, even England at Porton Down and the Americans at Fort Detrick. We know they were doing it, and we had contacts with all that work and the weapons that were developed." *Frontline transcripts from Plague Wars: A report on biological weapons threats and how the Soviet Union secretly amassed an arsenal of bio-weapons.* <http://www.pbs.org/wgbh/pages/frontline/shows/plague/sa/>. (Accessed 15 June 2000).

109. Interview with Dr. G. Scharf, former Director of Medical Hospital One (Pretoria), 6 July 2000.

110. Interview with prosecutor in the Basson trial, Dr. T. Pretorius, July 2000.

111. Affidavits and memorandums on file at the Freedom of Expression Institute, Johannesburg, South Africa. Prosecutors have already introduced into the trial documents found in Webster's possession that indicate that the WPW group was started in the early 1980s by a group of South African doctors. According to these documents, they were tasked by southern African health authorities to set up clinics in various African countries. The State alleges that Basson set up the companies to create a cover for himself as a successful businessman. "Audit reveals Basson fraud," *Business Day*, (14 June 2000).

112. Unlike the allegations of murder that rest on proving an indirect link to Basson, many of the fraud charges already introduced at the Basson trial established his direct involvement. Documents in Webster's possession showed Basson was the sole shareholder

and beneficiary owner of the various companies in his groups. Bruwer, the forensic auditor, introduced documents that proved that Basson's overseas companies, known as the WPW Group, and a local one, Wisdom Group had changed names and were restructured regularly. These restructurings complicated the investigation and made it more difficult to trace the flow of funds. Nonetheless, Bruwer was able to establish in detail the assets of these companies, which included two aircraft and properties in South Africa and overseas, as well as shares in other companies, all allegedly funded by state money. The state is trying to prove that Basson set up the companies to create a cover for himself as a "successful businessman." *Business Day*, 14 June 2000.

113. Interview with Jacques Pauw, Johannesburg, 29 June 2000. Pauw had interviewed the Project Coast scientists, including Andre Immelman, Schalk van Rensburg, Mike Odendaal, Daan Goosens, and Peter Lourens.

114. Interview with Col. (ret.) Johann Smith, 30 June 2000. Negotiations with Mandela and the end of the Angolan war led Basson and others to take advantage of a window of opportunity to get rich. He was able to deceive top generals and salted away millions. Smith was certain that Basson turned to dealing Ecstasy and other drugs, because his money was in Swiss banks, and he still needed to raise cash in South Africa.

115. Truth and Reconciliation Commission, 514.

116. Interview with Dr. Niels Knobel, Pretoria, 15 June 2000.

117. Interview with Gen. (ret.) Geldenhuys, 13 June 2000.

118. Interview with Gen. (ret.) Geldenhuys, 13 June 2000.

119. Interview with Brig. Gen (ret.) Bill Sass, July 1994. See Purkitt, "The politics of denuclearization," for further details of changes made at the end of P.W. Botha's rule.

120. See H. Purkitt, "'The cognitive basis of foreign policy expertise: Evidence from intuitive analyses of political novices and 'experts' in South Africa," pp. in D. Sylvan and J. Voss (Eds.) *Problem Representation and Political Decision Making*. (Cambridge: Cambridge University Press, 1998) for evidence of how widespread this fear was in 1992, after negotiations had broken down.

121. Interview with Dr. Ian Phillips, 13 June 2000.

122. Interview with David Steward, 26 June 2000.

123. According to Gen. (ret.) Meiring, interviewed 3 July 2000.

124. Interview with senior official of Office of the Secretary of Defense, July 1997.

125. According to Dr Renfrew Christie, interviewed 26 June 2000, the U.S., backed by Israel and the UK, issued a "hostile nation warning" to South Africa in January 1990 to

destroy the nuclear weapons program in order to keep it out of ANC hands. Christie claimed that, in the 1980s, the Israel had been involved in South African NBC programs, and the U.S. and Britain did not object to South Africa developing those programs.

126. Interview with Prof. Buys, 14 June 2000.

127. Interview with De Wet Potgieter, a journalist in Pretoria who has reported for several South African newspapers, 13 June 2000.

128. According to Col. Mike Ferguson, former Defense Attaché to South Africa, interviewed 23 May 2000 in Washington, D.C.

129. Interview with Gen. (ret.) Thirion, 13 June 2000.

130. According to Col. Mike Ferguson, interviewed 23 May 2000.

131. Interview with Col. (ret.) Joep Joubert, Pretoria, 23 June 2000, who worked with the CCB and Special Forces and retired from the SADF, before the Harms Commission findings. He believed that Chikane had to be eliminated as an "enemy." Joubert thought that the operation was well planned, and authority was given from the top, probably by P.W. Botha, Pik Botha, Adrian Vlok, and Magnus Malan. Joubert had testified before the Harms Commission that he had full responsibility for CCB and Special Forces missions and the budgeting of secret funds. He believed that a CBW program was essential and that in order to have a good defensive program, a good offensive program was needed.

132. Testimony of RRL scientist, Schalk Van Rensburg, to the TRC on 9 June 1998.

133. Bumbled assassination attempts using BW devices seem to have been pretty common. This fits with what BW terrorist experts have found in other cases. See Carus, *Working Paper on Bioterrorism*, 88.

Carus classifies this incident as probable or possible use but with no authoritative confirmation. In some cases, a biological agent was used, but there was no information to indicate whether the perpetrator knowingly caused the infection. The probability of intentional contamination for these cases is difficult to determine. See Carus, 90.

134. Jacques Pauw, *Into the Heart of Darkness: Confessions of Apartheid's Assassins* (Johannesburg: Jonathan Ball, 1997).

135. Pauw, *Into the Heart of Darkness*, 226.

136. According to Dr. Joynt, interviewed 14 June 2000.

137. According to De Wet Potgieter, a journalist in Pretoria who has reported for several South African newspapers, interviewed 13 June 2000, Uwe Paschke, who married P.W. Botha's daughter, and Philip Mijburgh, Magnus Malan's nephew, both had connections to the CBW program and Basson. Mijburgh especially profited from the privatization of the front companies for Project Coast.

138. In June 2000, the State in the Basson case called a number of witnesses in an attempt to prove that Basson lived a life of luxury, while defrauding the *apartheid*

government of millions of rand. The court presented evidence that Libya had shown an interest in Basson's luxury Pretoria home, Merton House, to use as an embassy. Basson had allegedly built the house to suit his luxurious lifestyle. However, the house became an embarrassment after extensive media coverage. It was eventually sold to the Zimbabwean government at a loss. Other witnesses testified that Basson took his business associates and employees on luxury overseas holiday trips and entertained lavishly, while earning a public servant's salary. The Angolan rebel leader, Jonas Savimbi, hired a private aircraft belonging to a group of companies owned by Basson. According to Defense Advocate, Jaap Cilliers, the aircraft often landed at U.S. military bases and was familiar to customs officials. He said the aircraft was seldom searched, which made it easier for Basson to transport equipment earmarked for Project Coast and SADF throughout the 1980s. *Business Day*, (14 June 2000).

139. Truth and Reconciliation Commission, 515.

140. Stefaans Brummer, *Weekly Mail and Guardian* (20 December 1995). See also Peter Hounam and Steve McQuillen, *The Mini-Nuke Conspiracy: Mandela's Nuclear Nightmare* (London: Faber & Faber, 1995). (Interviews, South Africa, 1994-2000).

141. The TRC reports Lt. Gen. Pierre Steyn's report to President F.W. de Klerk, 20 December 1992, as source of this incident.

142. TRC researchers could not arrange a meeting with the British investigator. Investigators met with Dr. Staub, a member of both the Swiss and the United Nations investigating team. He told them that he believed that the troops had suffered dehydration and had not been the victims of a chemical attack. This explanation struck the Commission's investigation unit as unlikely but is consistent with the assessment of foreign military personnel who investigated this and other alleged incidents of CBW use in Mozambique during the early 1990s. As one foreign official who had investigated these incidents explained, "it's very difficult to isolate cause of death when people are so malnourished and dehydrated when they die" Interview with foreign investigator, Johannesburg, South Africa, July 1992. See Purkitt, 1995 for additional details.

143. According to Vernon Joynt, interviewed 14 June 2000.

144. According to Dr. Ian Phillips, interviewed 13 June 2000.

145. According to Prosecutor Dr. Torie Pretorius, interviewed 20 June 2000.

146. According to General (ret.) Meiring, interviewed 3 July 2000.

147. During the interview, Meiring asserted that ANC/MK troops had been trained in CBW and that SADF intelligence concluded that there could have been chemical and biological agents in Mozambique. There is no corroborating evidence for this assertion.

148. Interview with David Steward, 26 June 2000.

149. Interview with Gen. (ret.) Meiring, 3 July 2000.

150. According to a *Weekly Mail & Guardian* account, 14 November 1997.

151. According to General (ret.) Meiring, interviewed 3 July 2000. Basson's soft retirement meant that he was no longer an active member of the SADF but continued to draw a paycheck as a reserve SADF officer and doctor at a military hospital.

152. This account of the Steyn Report relies on an interview with David Steward on 26 June 2000.

153. Interview with David Steward on 26 June 2000.

154. According to General (ret.) Meiring, interviewed 3 July 2000.

155. According to General (ret.) Meiring, interviewed 3 July 2000.

156. See Knobel's testimony to the Truth and Reconciliation Commission, July 1998.

157. Oppermann, "How the taxpayer footed the..." *Weekly Mail*, 27 June 1997.

158. According to Gen. (ret.) Meiring, interviewed 3 July 2000.

159. According to Rocky Williams, ISS, Pretoria and former MK colonel, interviewed 15 June 2000.

160. According to Ian Phillips, interviewed 13 June 2000.

161. Interviews with Ambassador Princeton Lyman, Washington, D.C., 25 May and 31 August 2000.

162. Interview with Peter Goosen, proliferation expert, Ministry of Foreign Affairs, Pretoria, 15 June 2000

163. According to Dr. Ian Phillips, ANC defense expert, interviewed 13 June 2000, Anglo-American cooperation on South Africa's NBC program was not as smooth as it may have seemed. During the 1989-94 period, the British were upset with the Americans at the latter's efforts to promote their own "solution for South Africa."

164. Interview with David Steward, 26 June 2000.

165. Interview with Ambassador Lyman, 31 August 2000.

166. Interview with Dr. Knobel, 15 June 2000.

167. Mangold, *Plague Wars*, 243.

168. Telephone interview with Roelof "Pik" Botha, 13 July 2000. He stressed in this interview that he never had detailed knowledge of South Africa's CBW program, except when he had to obtain assurances that the program was closed down before South Africa signed the NPT.

169. Interview by Helen Purkitt with senior South African OSD officials, Johannesburg, July 1997.

170. *Weekly Mail and Guardian*, 15 December 1994.

171. Koch and Fleming, *Weekly Mail and Guardian*, 15 December 1994.

172. Koch and Fleming, *Weekly Mail and Guardian*, 15 December 1994.

173. General (ret.) Meiring, interviewed 3 July 2000.

174. Oppermann, "How the taxpayer..." *Weekly Mail*, 27 June 1997.

175. Dr. Ian Phillips, interviewed June 13, 2000. Phillips also commented that, at the time, General Meiring, Chief of SANDF, held the ANC-dominated government and parliament in "complete contempt."

176. Although Basson's trips to Libya did decline after he was "rehired," the South African government at one point placed Basson under an undeclared "house arrest."

177. Oppermann, "How the taxpayer..." *Weekly Mail*, 27 June 1997.

178. Stefaans Brummer, *The Mail and Guardian*, 23 August 1996.

179. This view was expressed in confidential interviews with both South African and U.S. officials.

180. Soggot and Koch, *Weekly Mail and Guardian* archives, 27 June 1997.

181. Max du Preez, "Forward" in Wendy Orr, *From Biko to Basson*. (Saxonwold, South Africa, Contra Press, 2000).

182. A rump TRC staff remained to consider thousands of outstanding amnesty applications.

183. According to the current staff of the TRC, the political climate of the day prevented the TRC from employing former military and intelligence personnel as researchers. Bishop Tutu and other senior members of the TRC reportedly accepted the criticisms that they were naïve about the willingness of senior politicians and some foot soldiers in the *apartheid* regime to engage in full disclosure and reconciliation in hindsight. According to these staff members, Bishop Tutu has stated recently that he would not have agreed to grant blanket amnesty, based on his experiences working with certain recalcitrant and unrepentant witnesses. The current TRC staff is planning to publish codicils to the original report covering former President de Klerk's behavior as President, since a legal injunction by de Klerk forced the TRC to leave that section blank in the 1998 report. The Commission is also continuing to investigate the causes of the Heldenberg commercial airliner crash that was believed to be secretly carrying explosive materials for the nuclear program. An 800-page report about this incident was recently posted on the TRC web site and the Commission plans to issue a final report before it goes out of existence. (Interview with Mr. Patti Prior, Advocate, and associates in the Legal Department of the TRC, Cape Town, 20 July 2000).

The former top military leadership was so incensed by their treatment before the TRC and the procedures employed that they formed an informal Contact Bureau and issued an alternative report and response to the TRC final report. The purpose of this report was to

address the flaws and perceived biased and unfair treatment of the SADF by the TRC and to provide the public with a “true picture of the Cold War and armed conflict – the spirit and dynamics, the psychoses and syndromes.” See *Analysis of the TRC Report by the SADF Contact Bureau*, 28 May 1999, compiled by Maj. Gen. (ret.) Dirk Marais, Convener of the SADF Contact Bureau, Pretoria, South Africa. Despite this animosity, many of the retired generals associated with this network are now serving on advisory commissions for the SANDF. This group also maintains an office at SA Defense Headquarters. (Interview with Gen. (ret.) Dirk Marais, Convener of SADF Contact Bureau and telephone interview with Gen. (ret.) Jannie Geldenhuys, 13 July 2000).

184. Orr, *From Biko to Basson*, 326.

185. No coherent explanation has emerged to date to fully explain why Wouter Basson was caught peddling drugs or the timing of his drug arrest. Several of our interviewees emphasized the fact that there were tensions between the various agencies involved in monitoring Basson's movements prior to his arrest. A couple of these interviewees reported that they were told that Basson's arrest was the result of the NIA losing out in a bureaucratic battle, after “others blew the whistle” on Basson's drug activities. At the time of Basson's arrest, several South African press reports attributed the timing of the arrest to CIA reports to the South African government that Basson was getting ready to flee the country, possibly to work in the Middle East, a few weeks before his arrest. The reports described how Basson had been under the protection of the NIA due to concerns that he would be the target of a foreign assassin. Chris Bateman, “The man who knows too much about killing,” *Cape Times*, (12 June 1998), 17. Another news report, which claimed to be based on OSEO sources, reported that Basson had sent 4 cases (three of them were worth R6m, R5,57m, and R220,815) out of country to banks in Luxemburg and Belgium, shortly before his arrest. The account went on to allege that British and Belgian secret agents were involved in these transactions. See Chris Bateman, “Evil Einstein,” *Cape Times*, (12 June 1998), 17.

186. At the time of Basson's arrest, all of these investigators shared a sense of urgency because there was some question as to whether the government would be able to keep these records. These documents had been found towards the end of the week and the investigators were concerned that Basson's lawyers would be able to successfully argue in court the following week that the contents of the trunks were personal property. (Interview with a former TRC investigator, 20 July 2000).

187. The “*verkope lys*” was a list of items, allegedly ordered by Dr. Basson and given to CCB operatives. This list includes anthrax-infected cigarettes; shampoo poisoned with an insecticide, and poisoned chocolates. Wendy Orr, *From Biko to Basson* (Saxonwold, South Africa: Contra Press, 2000): 328-9. See Appendix C for the complete list.

188. Interview with a former senior investigator for the TRC, 21 July 2000.

189. Interview with Dr. Villa-Vicencia, former TRC investigator for the TRC, 21 July 2000.

190. For additional details of this meeting that included representatives of the old and new military and political guard, see Orr, 331-2. Dr. Orr notes that she arrived at this hastily called meeting and found that she was the only TRC (and the only woman) representative among the 40 participants.

191. Orr, *From Biko to Basson*, 332. She notes that Dr. Folb made himself forever unpopular with many participants at this meeting by making this observation.

192. Chandre Gould confirmed the agreement regarding the status of documents in a telephone interview in July 2000.

193. Telephone interview with Dr. Peter Folb, Cape Town, 20 July 2000.

194. For example, Dr. Jan Lourens, a bio engineer who worked at Delta G and later headed Protechnek, was one of the scientists who applied for amnesty to the TRC after Basson's arrest. He called the claims "nonsense" that Project Coast was a defensive program. He proved to be a particularly effective witness as, during his testimony, he was able to produce some of the "James Bond type" weapons developed to deliver fatal doses of poison applicators (including umbrellas, screw drivers, and a signet ring with spring-loaded dose-powder) that had been made to order for Wouter Basson. Lourens was also crucial as a witness because he testified that SADF chief Gen Kat Liebenberg told him to "forget about the whole thing..." and then told Lourens that "those are my toys...I want them back." Instead, he had buried these "toys" at his Northern Transvaal farm and resigned from the military. After Basson's arrest he told his story to Transvaal Attorney General J. d'Oliveira and testified before the TRC.

A former senior procurement official for Delta-G who worked for the company for eight years agreed to cooperate with prosecutors. This official proved to be very helpful since he kept a diary that contained details about all products and raw materials that entered the facility. The diary also described several business dealings that he had with Thor Chemicals executive, Alan Kidger, who was subsequently brutally murdered. This unnamed senior procurement official described Delta-G as "state-of-the-art" research laboratories consisting of five different facilities and described the cell structures that ensured that nobody really knew what the other was doing.

195. Michael Evans, "South Africa may have ordered British deaths," *The Times* (14 July 1998), 7.

196. Paraphrase of comments made by a former TRC investigator for TRC during an interview in July 2000.

197. Frontline transcript of interview from *Plague Wars: A report on biological weapons threats and how the Soviet Union secretly amassed an arsenal of bio-weapons*. 1998 PBS Online and WGBH/FRONTLINE television show, <http://www.pbs.org/wgbh/pages/frontline/shows/plague/sa/>.

198. This figure does not include the prosecution cost, those of the seven-year Office for Serious Economic Offenses investigation, or the cost of forensic auditor Hennie Bruwer's

investigation.

199. Information in this section is based on an interview with Laura Polleciett, Director, Freedom of Expression (FIX) and several South African reporters during July 2000, and on information contained in FIX administrative files.

200. *Report on the Truth and Reconciliation Commission ("TRC") Transcript on South Africa's Chemical and Biological Warfare*. Freedom of Expression Institute, WWBI:\CS\GB\MM\TRCHearings_CBW.doc., 4/1/99.

201. By the seventh week of the trial even the prosecution lacked the funds to pay for court transcripts. The Court adjourned at the end of November 1999, reserving the right to re-examine former Surgeon General Knobel once they had examined the transcripts for the evidence. This delay was necessitated by the fact that the prosecution team lacked the funds to purchase the daily transcripts from the transcription services!

202. A comprehensive search of all newspapers indexed in Nexis/Lexis during one week that the Basson trial was scheduled to be in session in Jacksonville, Florida did not locate a single published account of these proceedings. This fact underscores how dependent observers are on a single source for their information about the trial.

203. One worked for Black Sash, an NGO founded by white women liberals, whose initial mission was to help non-whites who had run afoul of *apartheid* pass laws.

204. During the late 1980s after the former South African government had banned nearly all labor and civic organizations that supported majority rule, a loose coalition of groups forms under the umbrella of the United Democratic Front (UDF). The UDF served as the principal source of legal political opposition to the *apartheid* regime. Continuing crackdowns led to many new, small non-governmental organizations (NGOs) being formed. Funding by the U.S. and other Western countries to promote democracy was critical to the operation of many of these groups throughout the late 1980s and early 1990s. Currently, organizations such as FIX are struggling to stay in business due to the lack of financial support from domestic or international donors.

205. Interview with Torie Pretorius, Prosecutor in the Basson trial, 12 July 2000.

206. Interview with Torie Pretorius, Prosecutor in the Basson trial, 12 July 2000.

207. Much of the descriptive narrative in this section relies on the trial summaries posted on the Centre for Conflict Resolution (CCR) web site and South African press accounts of actions taken during the trial to date. To access these summaries, see http://ccrweb.ccr.uct.ac.za/cbw/cbw_index.html

208. The prosecution also objected to conspiracy charges, arguing that it was unprecedented for a person to be charged with conspiracy to murder when the murder took place in another country. The reporter covering the trial for CCR, Marlene Burger, noted in her summary that there was a precedent in South Africa for this, since the case against former policeman, Eugene De Kock, included charges for crimes committed in another country (see

Trial Week One, CCR Web Page. Both prosecutors in this case, Dr. Tore Pretorius and Anton Ackerman (SC), are well aware of this precedent as they represented the State in its successful prosecution of De Kock in his capacity as head of the CCB unit of the South African police.

209. The judge also threw out two murder charges that occurred in Swaziland and a plot by an SADF hit squad to contaminate the water of a SWAPO transit camp with cholera shortly before the Namibian elections. The judge upheld the State's right to prosecute Basson for the death of a SWAPO member who was fed poisoned "jungle juice" in Owamboland because this victim was flown to a military hospital in South Africa for treatment and thus, died within the court's jurisdiction (Week Two, CCR Trial summary).

210. Interview with Dr. Torie Pretorius, Prosecutor, 12 July 2000.

211. Marlene Burger, the investigative reporter who is taking notes during the trial for the Centre for Conflict Resolution (CCR), observed in a phone interview that this was a highly unusual. In most complex cases involving intricate corporate maneuvers judges bring in expert assessors to help them interpret the evidence. (Interview, July 2000).

212. Quotes taken from the CCR Trial Summary for week 12.

213. Interviews with South African authorities, including the prosecutor, Dr. T. Pretorius, July 2000.